Section 5—Final Environmental Impact Statement

APPENDIX M DRAFT STREAM ASSESSMENT REPORT

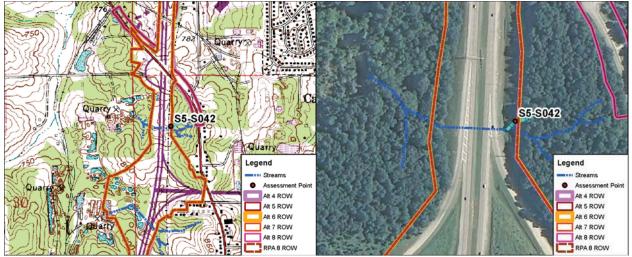
TECHNICAL REPORT APPENDICES

APPENDIX A Stream Impacts and

Stream Relocation Lengths by Alternative

APPENDIX B Stream Site Reports and

Data Sheets



Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream **USGS** Quadrangle: Bloomington 29

Stream Name: Unnamed Trib. Stout Creek Section:

Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A

Watershed: 05120202010 OHWM Width: 3.0 feet Channelized/Type: No/Natural OHWM Depth: 1.2 feet Ephemeral **USCOE Jurisdiction: Stream Type:** Yes **Evaluation Type: IDEM Jurisdiction:** HHEI Yes

Evaluation Score: Watershed Area: 0.02 sq mi 17 Sand/silt Legal Drain (Y/N): Ν **Predominant Sub:**

UTME: 1766774 ft **UTMN:** 14232380 ft

	Stream S5	-S042 – Class I PHWH	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	77	0.01	0.00
5	79	0.01	0.00
6	79	0.01	0.00
7	79	0.01	0.00
8	79	0.01	0.00
RPA 8	79	0.01	0.00

Description of Potential Impact:

Impacts to S5-S042 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately silt and leaf pack. There is a wide riparian buffer associated with this stream. The floodplain consists of immature forests on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross \$5-\$042 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

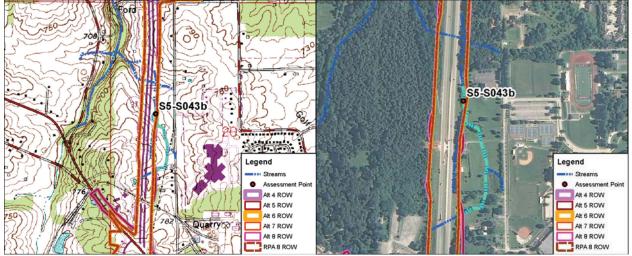
17

SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S042 DRAINAGE AREA (mi²) 0.02 SITE NUMBER 200 LAT. **39.19074** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.55402) (Natural-Class I) DATE 10/12/11 DEW/KSS SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 16% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% **Substrate** 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 14% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 12 70% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock TOTAL NUMBER OF SUBSTRATE TYPES: 3 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 0 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3.0'/1.25' AVERAGE BANKFULL WIDTH (meters): 0.91 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 >3 STREAM GRADIENT ESTIMATE ✓ Moderate to Severe Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STR	EAM INFORMATION (This Information Mus	st Also be Completed):	S5	-S042
QHEI PE	ERFORMED? - Yes V No QHEI Score	e (If Yes, Atta	ach Completed QHEI Form)	
	TREAM DESIGNATED USE(S)	,	,	
WWH Name:	• • • • • • • • • • • • • • • • • • • •		Distance from Evaluated Stream	
CWH Name:			Distance from Evaluated Stream	
EWH Name:			Distance from Evaluated Stream	
MAPPIN	IG: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHE	D AREA. CLEARLY MARK THE SITE LOCATIO	N
USGS Quadrangle	Name: Bloomington	NRCS Soil Map I	Page: NRCS Soil Map Stream Order	
County: Monroe		Township / City: Bloom	nington	
	LANEOUS	40/40/44		
Base Flow Condition	ons? (Y/N): Date of last precipitatio	n: 10/12/11	Quantity: 0.02	
Photograph Inform	ation:			
Elevated Turbidity	? (Y/N): _ N	20%		
Were samples coll	ected for water chemistry? (Y/N): N (N	Note lab sample no. or id.	and attach results) Lab Number:	
Field Measures:	Temp (°C) Dissolved Oxygen (mg/	pH (S.U.)	Conductivity (µmhos/cm)	
Is the sampling rea	ach representative of the stream (Y/N)	If not, please explain:		
Additional commer	nts/description of pollution impacts:			
BIOTIC	EVALUATION			
Performed? (Y/N):		•	al. NOTE: all voucher samples must be labeled w rimary Headwater Habitat Assessment Manual)	ith the site
Fish Observed? (Y Frogs or Tadpoles	N Voucher? (Y/N) N Salaman Observed? (Y/N) N Voucher? (Y/N) N	ders Observed? (Y/N) N Aquatic Macroinvertebra	Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N)	
Comments Regard	ling Biology:			
DRA	WING AND NARRATIVE DESCRIP	TION OF STREAM I	REACH (This <u>must</u> be completed):	
Include imp	ortant landmarks and other features of inte	rest for site evaluation a	nd a narrative description of the stream's loc	ation
		_		
	See Stream Assessment			
FLOW -	S5-S042 for site topo	graphic map,		
	aerial photograph, an	d resource pl	hotographs	

Save as pdf





Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Stout Creek Quarter: NW

Range: R1W
Watershed: 05120

Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI

Evaluation Score: 51
Legal Drain (Y/N): N

UTME: 1766909 ft **UTMN**: 14236431 ft

USGS Quadrangle: Bloomington

Section: 20
Township: T9N
IDEM 303(d) List: N/A
OHWM Width: 3.0 feet
OHWM Depth: 1.0 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.27 sq mi

Watershed Area: 0.27 sq mi
Predominant Sub: Sand/boulder

	Stream S5-	S043b – Class II PHWH	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	318	0.02	0.00
5	322	0.02	0.00
6	279	0.02	0.00
7	279	0.02	0.00
8	279	0.02	0.00
RPA 8	279	0.02	0.00

Description of Potential Impact:

Impacts to S5-S043b for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately sand and boulders. There is a narrow riparian corridor in most places on both banks of the stream. The floodplain consists of a mixture of INDOT ROW and a maintained institution yard where the Alternatives cross this stream. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043b are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

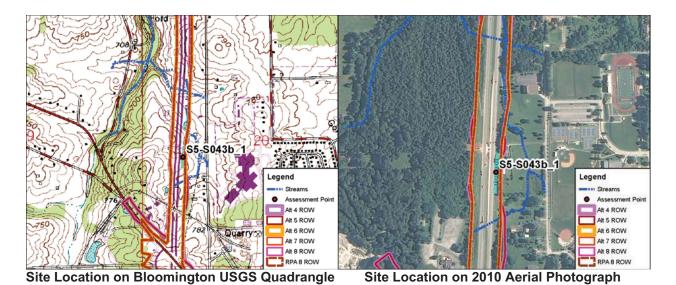


ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

	THIEF COOLS (Sum of metrics 1, 2, 3) :	
SITE NAME/LOCATION I-69 Section 5		
SITE NUMBER S	S5-S043b RIVER BASIN White River DRAINAGE AREA (mi²) 0.27	'
LENGTH OF STREAM REACH (ft) 200	LAT. 39.20186 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KS		
NOTE: Complete All Items On This Form	m - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruct	ions
STREAM CHANNEL NONE / NA MODIFICATIONS:	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE	ERY
SUBSTRATE (Estimate percent of every state)	ery type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	cant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	ΗΗE
	PERCENT D	/letri Point
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]	O/6	Ollit
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt]		ubstra
COBBLE (65-256 mm) [12 pts]	20% CLAY or HARDPAN [0 pt] 0%	/lax = 4
GRAVEL (2-64 mm) [9 pts]	10% MUCK [0 ptc] 0%	
SAND (<2 mm) [6 pts]	36% ARTIFICIAL [3 pts] 0%	26
	Cubateda Danastana	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock	54.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBS	STRATE TYPES: 22 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	· · · · · · · · · · · · · · · · · · ·	ool Dep //ax = 3
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	iux – s
> 22.5 - 30 cm [30 pts]	< 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	20
COMMENTS	MAXIMUM POOL DEPTH (centimeters): 46	
3. BANK FULL WIDTH (Measured as the		Bankfu
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
COMMENTS OHW = 3.0'/1.0'	AVERAGE RANKELLI MIRTH (m. 4 m.) 100	-
COMMENTS	AVERAGE BANKFULL WIDTH (meters): 1.00	5
	This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODF RIPARIAN WIDTH	PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ FLOODPLAIN QUALITY	
L R (Per Bank)	L R (Most Predominant per Bank) L R	
Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Immature Forest, Shrub or Old Urban or Industrial	
	Field Open Pasture, Row Crop	
✓ ✓ Narrow <5m	Residential, Park, New Field	
None	Fenced Pasture Mining or Construction	
COMMENTS Adjacent to row	w. vegetated channel	
FLOW REGIME (At Time of Eva	aluation) (Check ONLY one box):	
Stream Flowing	Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated poo	ols (Interstitial)	
COMMENTS_		
CINILIOCITY (Niconalism of the control	per 61 m (200 ft) of channel) (Check ONLY one box):	
None	1.0 2.0 3.0	
None 0.5 STREAM GRADIENT ESTIMATE	1.0 1.5 2.0 3.0 >3	
None 0.5	1.0 2.0 3.0	

ADDITIONAL STREAM INFORMATION	I (This Information Must	: Also be Completed):		S5-S0431
QHEI PERFORMED? - Y	es No QHEI Score	(If Yes, Atta	ach Completed QHEI For	m)
DOWNSTREAM DESIGNATE WWH Name: Stout Creek CWH Name: EWH Name:	ED USE(S)		_ Distance from Evaluate _ Distance from Evaluate _ Distance from Evaluate	ed Stream _
MAPPING: ATTACH COPIES	OF MAPS, INCLUDING TH	HE <u>ENTIRE</u> WATERSHED	DAREA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Name: Bloomingto	n	NRCS Soil Map F	Page: NRCS Soi	l Map Stream Order
County: Monroe	т	Township / City:Bloom	ington	
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Photograph Information:	Date of last precipitation:		Quantity:	
Elevated Turbidity? (Y/N):	Canopy (% open):	95%		
Were samples collected for water chem			and attach results) Lab N	umber:
	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µm	nhos/cm)
Is the sampling reach representative of	the stream (Y/N)	If not, please explain:		
Additional comments/description of poll	ution impacts:			
ID numb	er. Include appropriate field r? (Y/N) N Salamand	•	imary Headwater Habitat A Voucher? (Y/N)	oles must be labeled with the site ssessment Manual) Voucher? (Y/N)
DRAWING AND NAR Include important landmarks an				
•	eam Assessmen			
	b for site to		_	
aerial	photograph, a	and resource	pnotographs	





T9N

Aquatic Resource: Stream USGS Quadrangle: Bloomington Stream Name: Unnamed Trib. Stout Creek Section: 20

Stream Name: Unnamed Trib. Stout Creek Section:
Quarter: SW Township:

Range: R1W IDEM 303(d) List: N/A
Watershed: 05120202010 OHWM Width: 1.0 feet
Channelized/Type: Yes/Concrete Gutter OHWM Depth: 0.2 feet

Stream Type: Ephemeral USCOE Jurisdiction: No Evaluation Type: HHEI IDEM Jurisdiction: No

Evaluation Score: 12 **Watershed Area:** 0.01 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Artificial

UTME: 1766813 ft **UTMN**: 14235713 ft

	Stream S5-S043b	_1 – Modified Class I PHWI	1
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	429	0.01	0.02
5	429	0.01	0.02
6	429	0.01	0.02
7	429	0.01	0.02
8	429	0.01	0.02
RPA 8	429	0.01	0.02

Description of Potential Impact:

Impacts to S5-S043b_1 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter located within existing INDOT ROW. There is no riparian buffer associated with this artificial channel. The floodplain consists of maintained INDOT ROW. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043b_1 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



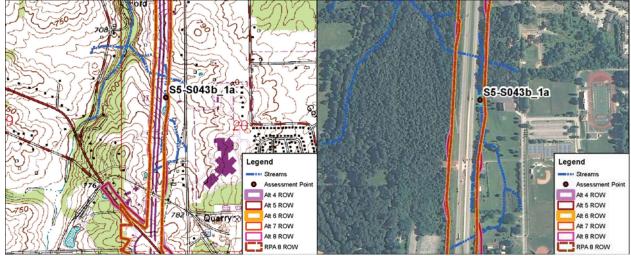
ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S043b_1 RIVER BASIN White River DRAINAGE AREA (mi²) 0	.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.19989 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KSS COMMENTS (Long: -86.55383) (Concrete Gutter-Modified Cla	ss I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	ше
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metri
□ □ BLDR SLABS [16 pts] □ □ SILT [3 pt] 0%	Points
BOULDER (>256 mm) [16 pts]	Substrat
BEDROCK [16 pt]	Max = 40
GRAVEL (2-64 mm) [9 pts] 0% MUCK [0 pts] 0%	7
SAND (<2 mm) [6 pts] 0% ARTIFICIAL [3 pts] 100%	7
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.30	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m	
Moderate 5-10m Field We have a substitution of the st, Strictly of Old We have a substitution of the st, Strictly of Old We have a substitution of the st, Strictly of Old We have a substitution of Old We have a s	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	pp
None Fenced Pasture Mining or Construction	
COMMENTS	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral))
COMMENTS	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
✓ None	
\square 0.5 \square 1.5 \square 2.5 \square >3	
0.5	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/1)	00 ft)

			S5-S043b 1
ADDITIONAL STREAM INFORMATION (This Information	n Must Also be Comp	eted):	23-2043D_1
QHEI PERFORMED? - Yes V No QHEI	Score(If	es, Attach Completed QHEI	Form)
DOWNSTREAM DESIGNATED USE(S)			
WWH Name: Stout Creek		Distance from Eva	luated Stream
CWH Name: _		_ Distance from Eva	luated Stream
EWH Name:		Distance from Eva	uated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLU	ING THE ENTIRE WAT	ERSHED AREA. CLEARLY M	ARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington	NRCS So	il Map Page: NRCS	Soil Map Stream Order
County: Monroe	Township / City:_	Bloomington	
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Y Date of last preci	itation: 10/12/1	1 Quantity: 0	.02
Photograph Information:			
Elevated Turbidity? (Y/N): N Canopy (% ope	100%		
Were samples collected for water chemistry? (Y/N):N	(Note lab sample n	o. or id. and attach results) La	ab Number:
Field Measures: Temp (°C) Dissolved Oxyger		S.U.) Conductivity	(µmhos/cm)
Is the sampling reach representative of the stream (Y/N)	If not, please exp	lain:	
Additional comments/description of pollution impacts:			
BIOTIC EVALUATION			
Performed? (Y/N): N (If Yes, Record all observat	ons. Voucher collections	optional. NOTE: all voucher s	amples must be labeled with the site
, , _	iate field data sheets fro	n the Primary Headwater Habit	at Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Sa	amanders Observed? (Y/N) N Voucher? (Y/N)	N N N N N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N)	N Aquatic Macroin	rertebrates Observed? (Y/N)	N Voucher? (Y/N)
Comments Regarding Biology:			
DRAWING AND NARRATIVE DESC	RIPTION OF STR	FAM REACH (This mu	st he completed):
		-	
Include important landmarks and other features of	interest for site evalu	ation and a namative descrip	otion of the stream's location
	mank David		
See Stream Assess			
S5-S043b_1 for si		_	
aerial photograph	, and resour	cce photographs	

Save as pdf

Reset Form



Site Location on 2010 Aerial Photograph

T9N

Aquatic Resource: Stream USGS Quadrangle: Bloomington Stream Name: Unnamed Trib. Stout Creek Section: 20

Stream Name: Unnamed Trib. Stout Creek Section: Township:

 Range:
 R1W
 IDEM 303(d) List:
 N/A

 Watershed:
 05120202010
 OHWM Width:
 3.0 feet

Channelized/Type:Yes/Dump Rock GutterOHWM Depth:0.1 feetStream Type:EphemeralUSCOE Jurisdiction:YesEvaluation Type:HHEIIDEM Jurisdiction:Yes

Evaluation Score: 12 Watershed Area: 0.01 sq mi
Legal Drain (Y/N): N Predominant Sub: Artificial

UTME: 1766895 ft **UTMN**: 14236640 ft

	Stream S5-S043b	_1a – Modified Class I PHW	Н
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	109	0.01	0.00
5	109	0.01	0.00
6	109	0.01	0.00
7	109	0.01	0.00
8	109	0.01	0.00
RPA 8	109	0.01	0.00

Description of Potential Impact:

Impacts to S5-S043b_1a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a dump rock gutter located within existing INDOT ROW. There is no riparian buffer associated with this artificial channel. The floodplain consists of maintained INDOT ROW. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043b_1a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



ChieFP Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

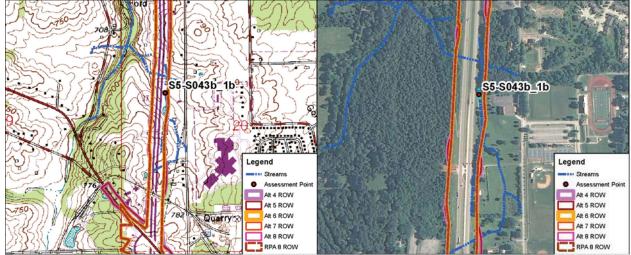
SITE NAME/LOCATION I-69 Section 5	
SITE NAME/LOCATION STEENAMBER S5-S043b_1a RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ft) 109 LAT. 39.20060 LONG. RIVER CODE RIVER MILE	
DATE 02/19/13 SCORER DEW COMMENTS (Long: -86.55371) (Dump Rock Gutter-Modified	l Class I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	ı HHEI
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] BEDROCK [16 pt] FINE DETRITUS [3 pts]	Substrat Max = 4
COBBLE (65-256 mm) [12 pts]	IVIAX - 4
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] O% ARTIFICIAL [3 pts] 100%	7
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	"
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
→ > 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
2 DANK FILL WIDTH (Massured on the guarante of 2.4 massurements) (Check ONI V one box):	Rankful
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 0.91 **NOTE: River Left (L) and Right (R) as looking downstream ★	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): ### AVERAGE BANKFULL WIDTH (meters): ### D.0.91 This information must also be completed RIPARIAN WIDTH ### FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Wide >10 Mature Forest, Wetland Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ∴ NOTE: River Left (L) and Right (R) as looking downstream ∴ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' AVERAGE BANKFULL WIDTH (meters):	Width Max=30
34.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Open Pasture, Row Completed Residential, Park, New Field Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) None moderate Dry channel, isolated pools, no flow (Intermitte Dry channel, no water (Ephemeral)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Penced Pasture COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) One channel, isolated pools; no flow (Interm	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Penced Pasture COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) Check ONLY one box): One channel, isolated pools; no flow (Intermitte) One channel, isolated pools; no flow (Interm	Width Max=30

PHWH Form Page - 2

aerial photograph, and resource photographs

Save as pdf





Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Stout CreekSection:Quarter:SWTownship:

Range: R1W IDEM 3
Watershed: 05120202010 OHWM
Channelized/Type: Yes/Concrete Gutter OHWM
Stream Type: Ephemeral USCOE

Evaluation Type: HHEI
Evaluation Score: 12
Legal Drain (Y/N): N

UTME: 1766883 ft **UTMN**: 14236737 ft

Section: 20 Township: T9N

Township: 19N
IDEM 303(d) List: N/A
OHWM Width: 1.0 feet
OHWM Depth: 0.2 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.01 sq mi

Watershed Area: 0.01 sq m Predominant Sub: Artificial

	Stream S5-S043b	_1b – Modified Class I PHW	Н
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	109	0.01	0.00
5	109	0.01	0.00
6	109	0.01	0.00
7	109	0.01	0.00
8	109	0.01	0.00
RPA 8	109	0.01	0.00

Description of Potential Impact:

Impacts to S5-S043b_1b for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter located within existing INDOT ROW. There is no riparian buffer associated with this artificial channel. The floodplain consists of maintained INDOT ROW. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043b_1b are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



ChieFP Primary Headwater Habitat Evaluation Form

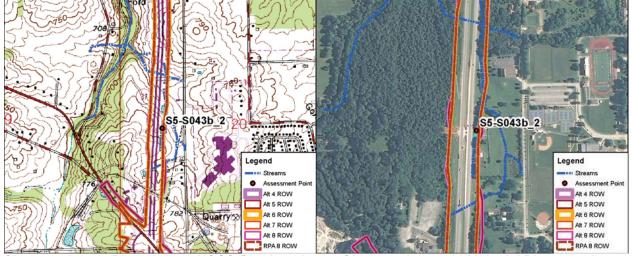
12

HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S043b_1b RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ft) 109 LAT. 39.20273 LONG. RIVER CODE RIVER MILE	
DATE 02/19/13 SCORER DEW COMMENTS (Long: -86.55356) (Concrete Gutter-Modified Cla	ass I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	ı HHEI
TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] BEDROCK [16 pt] D'A FINE DETRITUS [3 pts] 0%	Substrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt]	Max = 40
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ MUCK [0 pts] ☐ 100% ☐	7
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A+B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankful Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.30	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Mature Forest, Shrub or Old D Mature Forest, Shrub or Old	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (< 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Cr V None COMMENTS Mining or Construction COMMENTS	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field Narrow <5m Residential, Park, New Field FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): OHW 1'/0.2' AVERAGE BANKFUL WIDTH (meters): OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): OHW 1'/0.2' OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): OHW 1'/0.2' OHW 1'/0.2' OHW 1'/0.2' OHW 1'/0.2' OHW 1'/0.2' OHW 1'/0.2'	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ⅓ RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field Fenced Pasture COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN Wide >10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and	Width Max=30 5

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Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Stout CreekSection:20Quarter:SWTownship:T9N

Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 3.0 f

Watershed:05120202010OHWM Width:3.0 feetChannelized/Type:Yes/Dump Rock GutterOHWM Depth:1.0 feetStream Type:EphemeralUSCOE Jurisdiction:NoEvaluation Type:HHEIIDEM Jurisdiction:No

Evaluation Score: 12 Watershed Area: 0.01 sq mi
Legal Drain (Y/N): N Predominant Sub: Artificial

UTME: 1766846 ft **UTMN**: 14235971 ft

Stream S5-S043b_2 – Modified Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	114	0.01	0.00
5	114	0.01	0.00
6	114	0.01	0.00
7	114	0.01	0.00
8	114	0.01	0.00
RPA 8	114	0.01	0.00

Description of Potential Impact:

Impacts to S5-S043b_2 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a dump rock gutter located within existing INDOT ROW. There is no riparian buffer associated with this artificial channel's left bank and a narrow shrub buffer along the right bank. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043b_2 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



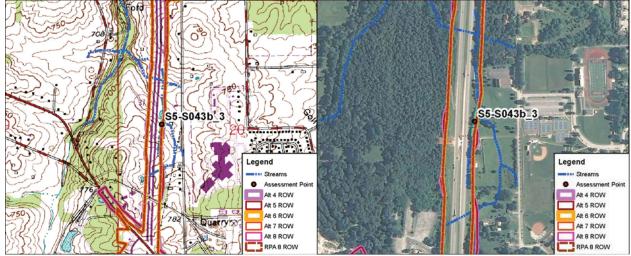
ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S043b_2 RIVER BASIN White River DRAINAGE AREA (mi²) 0	.01
LENGTH OF STREAM REACH (ft) 115 LAT. 39.20060 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KSS COMMENTS (Long: -86.55371) (Dump Rock Gutter-Modified C	Class I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	UUEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 0%	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts]	Max = 40
GRAVEL (2-64 mm) [9 pts]	7
SAND (<2 mm) [6 pts]	L
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) Check	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m (-3' 3") [5 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW 3'/0.1' AVERAGE BANKFULL WIDTH (meters): 0.91	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Field Wrban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	op
None Fenced Pasture Mining or Construction	
COMMENTS	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	`
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral))
COMMENTS_	L
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 0.5 1.5 2.5	Ĺ
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	00 ft)

ADDITIONAL CTDF AM INFORMATION (This Information Must Alex be Consulted)	S5-S043b_2
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed)	
QHEI PERFORMED? - Yes Mo QHEI Score (If Yes, A	ttach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Stout Creek	Distance from Evaluated Stream
CWH Name: EWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSH	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Mag	Page: NRCS Soil Map Stream Order
County: Monroe Township / City: Bloc	omington
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 10/12/11	Quantity: 0.02
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id	d. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
N	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optio ID number. Include appropriate field data sheets from the	nal. NOTE: all voucher samples must be labeled with the site
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinverteb	voucher? (Y/N) rates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	N
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation	and a narrative description of the stream's location
See Stream Assessment Form	
S5-S043b_2 for site topographic	map,
aerial photograph, and resource	photographs

Save as pdf

Reset Form



Site Location on 2010 Aerial Photograph

20

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib. Stout Creek Section:

 Quarter:
 NW
 Township:
 T9N

 Range:
 R1W
 IDEM 303(d) List:
 N/A

OHWM Width: Watershed: 05120202010 0.9 feet Channelized/Type: Yes/Concrete Gutter OHWM Depth: 0.2 feet Stream Type: **USCOE Jurisdiction:** Ephemeral No **Evaluation Type:** HHEI **IDEM Jurisdiction:** No

Evaluation Score: 12 Watershed Area: 0.01 sq mi
Legal Drain (Y/N): N Predominant Sub: Artificial

UTME: 1766878 ft **UTMN**: 14236172 ft

Stream S5-S043b_3 – Modified Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	334	0.01	0.00
5	334	0.01	0.00
6	334	0.01	0.00
7	334	0.01	0.00
8	334	0.01	0.00
RPA 8	334	0.01	0.00

Description of Potential Impact:

Impacts to S5-S043b_3 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter. There is narrow riparian buffer associated with this artificial channel. The adjacent floodplain is dominated by INDOT ROW on the left and new field on the right. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043b_3 are on the second page of this form.



Photograph Taken Upstream



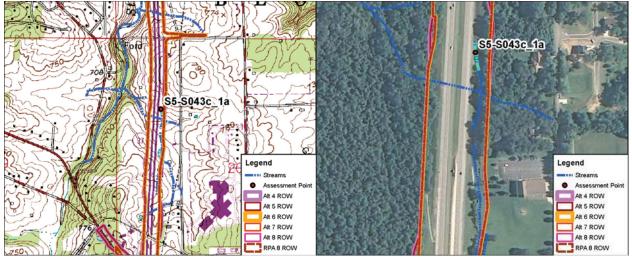


ChieFPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S043b_3 RIVER BASIN White River DRAINAGE AREA (mi²) 0	.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.20112 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KSS COMMENTS (Long: -86.55359) (Concrete Gutter-Modified Cla	ss I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BLDR SLABS [16 pts]	ı Omit
BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] 0%	Substrat Max = 4
☐ COBBLE (65-256 mm) [12 pts] 0% ☐ CLAY or HARDPAN [0 pt] 0% ☐ GRAVEL (2-64 mm) [9 pts] 0% ☐ MUCK [0 pts] 0%	
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts] 100%	7
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW 0.9'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.27	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Wide >10m	
Field — Open Pasture Row Cro	ממ
Narrow <5m Residential, Park, New Field D	P
None Fenced Pasture Mining or Construction COMMENTS	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	'
Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 2.0 3.0 3.0 0.5 1.5 2.5 3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe	00 ft)





Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Stout CreekSection:20Quarter:NWTownship:T9N

Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 1.0 feet Channelized/Type: Yes/Concrete Gutter OHWM Depth: 0.2 feet **USCOE** Jurisdiction: **Stream Type:** Ephemeral No

Evaluation Type:HHEIIDEM Jurisdiction:NoEvaluation Score:12Watershed Area:0.01 sq miLegal Drain (Y/N):NPredominant Sub:Artificial

UTME: 1766888 ft **UTMN**: 14237282 ft

Stream S5-S043c_1a – Modified Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	151	0.01	0.15
5	151	0.01	0.16
6	151	0.01	0.11
7	151	0.01	0.11
8	151	0.01	0.11
RPA 8	151	0.01	0.11

Description of Potential Impact:

Impacts to S5-S043c_1a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter. There is no riparian buffer associated with this artificial channel. The floodplain consists of maintained INDOT ROW. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043c_1a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

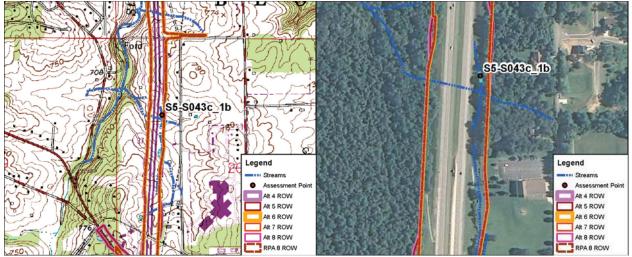


ChieFP Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5 SITE NUMBER S5-S043c_1a RIVER BASIN White River DRAINAGE AREA (mi²) 0.01 LENGTH OF STREAM REACH (ft) 150 LAT. 39.20420 LONG. RIVER CODE RIVER MILE	一
	=
LENGTH OF STREAM REACH (ft)150LAT. 39.20420_ LONG RIVER CODE RIVER MILE	
DATE 05/30/12 SCORER JDP COMMENTS (Long: -86.55354) (Concrete Gutter-Modified Class I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruction	ons
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVE MODIFICATIONS:	RY.
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HEI
TYPE PERCENT TYPE PERCENT M	letri
BLDR SLABS [16 pts] 0% SILT [3 pt]	oints
LILL BEDROCK 116 DTI V% LILL FINE DETRITUS 13 DTSI V/	ıbstrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt]	ax = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ 0% ☐ ☐ MUCK [0 pts] ☐ ☐ 100% ☐ 100% ☐ ☐ 100% ☐ 1	7
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	\ + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
. ,	ol Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	ax = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	_
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
	ankful
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Width lax=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	_
COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.30	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\text{NOTE: River Left (L) and Right (R) as looking downstream \$\text{\$\frac{1}{2}}\$	
RIPARIAN WIDTH FLOODPLAIN QUALITY LR (Per Bank) LR (Most Predominant per Bank) LR	
L N (FEI DAIN) L N (MOST FIEUDININAIT PEI DAIN) L N	
☐ Wide >10m ☐ Mature Forest, Wetland ☐ Conservation Tillage	
Wide >10m	
Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Narrow <5m None Mature Forest, Wetland Immature Forest, Shrub or Old Field Open Pasture, Row Crop Mining or Construction	
Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Narrow <5m Mature Forest, Wetland Immature Forest, Shrub or Old Field Open Pasture, Row Crop	
Wide >10m	

PHWH Form Page - 2

Save as pdf



Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Stout CreekSection:20Quarter:NWTownship:T9NRange:R1WIDEM 303(d) List:N/A

Watershed: 05120202010 OHWM Width: 3.0 feet Channelized/Type: Yes/Dump Rock Gutter OHWM Depth: 0.1 feet

Stream Type:EphemeralUSCOE Jurisdiction:NoEvaluation Type:HHEIIDEM Jurisdiction:No

Evaluation Score: 12 **Watershed Area:** 0.01 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Artificial

UTME: 1766913 ft **UTMN**: 14237160 ft

Stream S5-S043c_1b – Modified Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	62	0.01	0.00
5	62	0.01	0.00
6	62	0.01	0.00
7	62	0.01	0.00
8	62	0.01	0.00
RPA 8	62	0.01	0.00

Description of Potential Impact:

Impacts to S5-S043c_1b for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a dump rock gutter. There is no riparian buffer associated with this artificial channel. The floodplain consists of maintained INDOT ROW. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043c_1b are on the second page of this form.



Photograph Taken Upstream

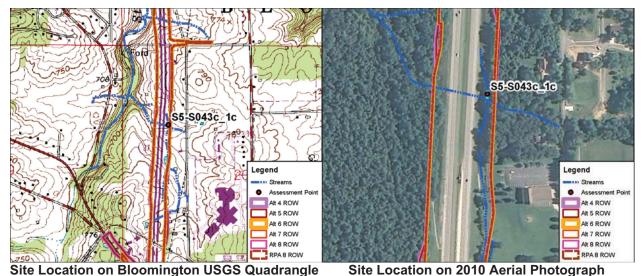




ChieFP Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S043c_1b RIVER BASIN White River DRAINAGE AREA (mi²)	.01
LENGTH OF STREAM REACH (ft) 62 LAT. 39.20387 LONG. RIVER CODE RIVER MILE	
DATE 05/30/12 SCORER JDP COMMENTS (Long: -86.55345) (Dump Rock Gutter-Modified C	Class I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of SAND (<2 mm) [6 pts] Total of Percentages of SAND (<2 mm) [6 pts] Total of Percentages of SAND (<2 mm) [6 pts] Total of Percentages of SAND (<2 mm) [6 pts] Total of Percentages of SAND (<2 mm) [6 pts] BUDR SLABS [16 pts] SILT [3 pt] D% CLAY or HARDPAN [0 pts] D% ARTIFICIAL [3 pts] D% Substrate Percentage 100% (B)	HHEI Metric Points Substrate Max = 40 7
Bldr Slabs, Boulder, Cobble, Bedrock 6 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 5 cm - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
COMMENTS OHW 3'/0.1' AVERAGE BANKFULL WIDTH (meters): 1.00	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ♣NOTE: River Left (L) and Right (R) as looking downstream ♣ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field Urban or Industrial	
Narrow <5m	p
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check <i>ONLY</i> one box): None 1.0 2.0 3.0 >3.0 >3.0 >3.0	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10)0 ft)





one Location on Discrimington 3000 Quadrangle One Locat

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Stout CreekSection:20Quarter:NWTownship:T9N

Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 0.9 feet Channelized/Type: Yes/Concrete Gutter OHWM Depth: 0.2 feet **USCOE Jurisdiction: Stream Type:** Ephemeral No **Evaluation Type: IDEM Jurisdiction:** HHEI No

Evaluation Score: 12 Watershed Area: 0.01 sq mi
Legal Drain (Y/N): N Predominant Sub: Artificial

UTME: 1766919 ft **UTMN**: 14237102 ft

Stream S5-S043c_1c – Modified Class I PHWH					
Alternatives	Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acres)				
4	49	0.01	0.00		
5	49	0.01	0.00		
6	49	0.01	0.00		
7	49	0.01	0.00		
8	49	0.01	0.00		
RPA 8	49	0.01	0.00		

Description of Potential Impact:

Impacts to S5-S043c_1c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter. There is no riparian buffer associated with this artificial channel. The floodplain consists of maintained INDOT ROW. Photographs taken downstream in the area where these Alternatives cross S5-S043c_1c are on the second page of this form.



Photograph Taken Downstream

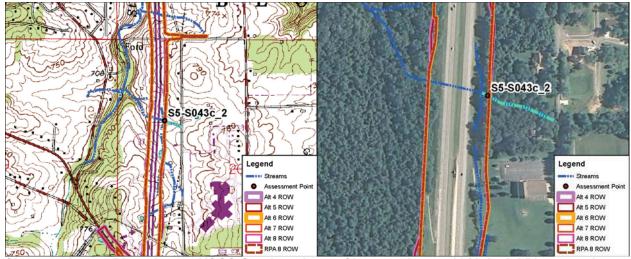


Photograph Taken Downstream



SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S043c_1c RIVER BASIN White River DRAINAGE AREA (mi²)	.01
LENGTH OF STREAM REACH (ft) 50 LAT. 39.20371 LONG. RIVER CODE RIVER MILE	
DATE 05/30/12 SCORER JDP COMMENTS (Long: -86.55343) (Concrete Gutter-Modified Cla	ss I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] BEDROCK [16 pt] BEDROCK [16 pt] BEDROCK [16 pt]	Substrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0%	Max = 40
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ MUCK [0 pts] ☐ 100% ☐	7
Total of Percentages of Annual (A) Substrate Percentage (B)	AIR
Bldr Slabs, Boulder, Cobble, Bedrock Check	A+B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]	o
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
OLIM 0.01/0.21	١
COMMENTS Onv 0.9 /0.2 AVERAGE BANKFULL WIDTH (meters): 0.27	5
COMMENTS OHW 0.9'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.27	5
This information must also be completed	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH ELR (Per Bank) LR (Most Predominant per Bank) LR	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Field	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old V Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Cn	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Field	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Cn None Fenced Pasture Mining or Construction COMMENTS	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ♣NOTE: River Left (L) and Right (R) as looking downstream ♣ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Field Narrow <5m Penced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	op
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	op
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	op
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ARIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Open Pasture, Row Cn None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): OCHOCK ONLY one box): None 3.0 3.0	op
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY **NOTE: River Left (L) and Right (R) as looking downstream ** RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Open Pasture, Row Cn Plow Regime (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3	op
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ARIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Open Pasture, Row Cn None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 Check ONLY one box): OCHOCK ONLY one box): None 3.0 3.0	op

Reset Form



Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Stout Creek NW Range: R1W

Watershed: 05120202010
Channelized/Type: Yes/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI

Evaluation Secret: 12

Evaluation Score: 18 Legal Drain (Y/N): N

UTME: 1766946 ft **UTMN**: 14237063 ft

USGS	Quadrangle:	Bloomington
-	addarding:	Dioonington

Section: 20 Township: T9N IDEM 303(d) List: N/A OHWM Width: 3.0 feet OHWM Depth: 0.5 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area: 0.01 sq mi

Watershed Area: 0.01 sq mi Predominant Sub: Sand/Silt

Stream S5-S043c_2 – Class I PHWH					
Alternatives	Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acres)				
4	44	0.01	0.00		
5	47	0.01	0.00		
6	43	0.01	0.00		
7	43	0.01	0.00		
8	43	0.01	0.00		
RPA 8	43	0.01	0.00		

Description of Potential Impact:

Impacts to S5-S043c_2 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately sand and silt. There is a narrow riparian corridor in most places on both banks of the stream. The floodplain consists of immature forest and shrubs. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043c_2 are on the second page of this form.



Photograph Taken Upstream



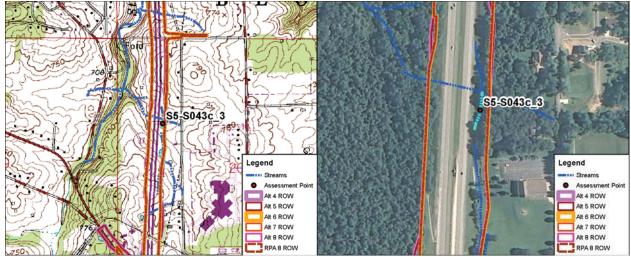
Photograph Taken Downstream



18

SITE NAME/LOCATION I-69 Section 5 S5-S043c_2 RIVER BASIN White River DRAINAGE AREA (mi²) 0.01 SITE NUMBER 405 LAT. **39.20345** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE DATE 02/19/13 COMMENTS (Long: -86.55277) (Natural- Class I) SCORER DEW NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 15% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 10% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 13 70% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 10.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 0 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 3'/0.5' AVERAGE BANKFULL WIDTH (meters): 0.90 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) ✓ Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

Reset Form



Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Stout CreekSection:20Quarter:NWTownship:T9NRange:R1WIDEM 303(d) List:N/A

Watershed: 05120202010 OHWM Width: 1.0 feet Channelized/Type: Yes/Concrete Gutter OHWM Depth: 0.2 feet **USCOE Jurisdiction: Stream Type:** Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 12 Watershed Area: 0.01 sq mi
Legal Drain (Y/N): N Predominant Sub: Artificial

UTME: 1766907 ft **UTMN**: 14236983 ft

Stream S5-S043c_3 – Modified Class I PHWH				
Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acres)				
4	204	0.01	0.15	
5	204	0.01	0.16	
6	204	0.01	0.14	
7	204	0.01	0.14	
8	204	0.01	0.14	
RPA 8	204	0.01	0.14	

Description of Potential Impact:

Impacts to S5-S043c_3 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. This segment of stream is captured by a concrete gutter. The predominant substrate is artificial. There is no riparian buffer along the left bank and a narrow riparian zone on the right bank of this ditch. The floodplain consists of the urban roadway on the left bank and immature forest on the right. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S043c_3 are on the second page of this form.



Photograph Taken Upstream

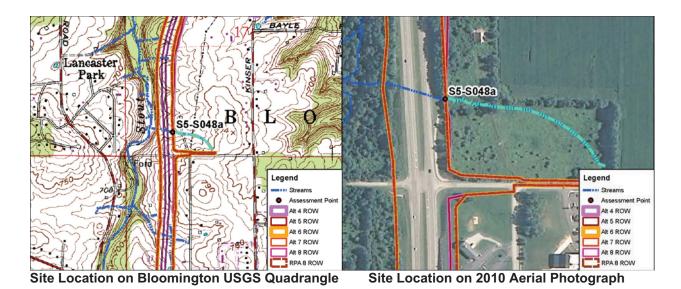


Photograph Taken Downstream



SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S043c_3 RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ft) 204 LAT. 39.20337 LONG. RIVER CODE RIVER MILE	
DATE 02/19/13 SCORER DEW COMMENTS (Long: -86.55347) (Concrete Gutter-Modified C	ass I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	ı HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BUDDER (>256 mm) [16 pts]	Points
BEDROCK [16 pt]	Substrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0%	Max = 4
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 100%	7
Total of Percentages of O. O.O. (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	^.b
	<u> </u>
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3 RANK FILL WIDTH (Measured as the average of 3.4 measurements) (Check ONLY one hov):	Bankful
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): ### Of the importance of the completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 0.30 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): ### AVERAGE	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): ### AVERAGE BANKFULL WIDTH (meters): ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ### D.30 ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ###	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): ### AVERAGE BANKFULL WIDTH (meters): ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ### D.30 ### AVERAGE BANKFULL WIDTH (meters): ### D.30 ###	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS None Fenced Pasture Mining or Construction	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Shrub or Old Field Value Forest, Shrub or Old Field Value Forest, New Field Open Pasture, Row Completed RIPARIAN WIDTH Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH Residential, Park, New Field Open Pasture, Row Completed Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Wide >10m Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Shrub or Old Field Narrow <5m None Fenced Pasture COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS *1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] >1.0 m (<=3' 3") [5 pts] *2 1.0 m (<=3' 3") [5 pts] *3.0 m - 4.0 m (> 3' 3" - 4' 8") [15 pts] *4 10 m (<=3' 3") [5 pts] *5 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): OBJECTION OHW 1'/0.2' OBJECTION OHW 1'/0.2' OBJECTION OHW	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): OHW 1'/0.2' AVERAGE BANKFULL WIDTH (meters): OBJECTION OHW 1'/0.2' OBJECTION OHW 1'/0.2' OBJECTION OHW	Width Max=30

Reset Form



Aquatic Resource: Stream USGS Quadrangle: Bloomington Stream Name: Unnamed Trib. Stout Creek Section: 17

Stream Name:Unnamed Trib. Stout CreekSection:17Quarter:SWTownship:T9NRange:R1WIDEM 303(d) List:N/A

OHWM Width: Watershed: 05120202010 3.0 feet Channelized/Type: No/Natural OHWM Depth: 1.3 feet Stream Type: Ephemeral **USCOE** Jurisdiction: Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 18 Watershed Area: 0.04 sq mi
Legal Drain (Y/N): N Predominant Sub: Sand/silt

UTME: 1766936 ft **UTMN**: 14239254 ft

Stream S5-S048a – Class I PHWH				
Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acres)				
4	14	0.01	0.00	
5	16	0.01	0.00	
6	16	0.01	0.00	
7	16	0.01	0.00	
8	16	0.01	0.00	
RPA 8	16	0.01	0.00	

Description of Potential Impact:

Impacts to S5-S048a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of sand, silt and boulders. There is a wide riparian corridor consisting of immature trees on the left bank and no woody vegetation on the right bank consisting of an old herbaceous field. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S048a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form

18

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S048a DRAINAGE AREA (mi²) 0.04 SITE NUMBER 200 LAT. **39.20962** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.55333) (Natural-Class I) DATE 10/12/11 DEW/KSS SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 15% 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 10% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 13 70% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 10.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 0 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/1.3' AVERAGE BANKFULL WIDTH (meters): 0.90 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0

✓ Moderate to Severe

>3

Severe (10 ft/100 ft)

Flat (0.5 ft/100 ft)

0.5

STREAM GRADIENT ESTIMATE

Flat to Moderate

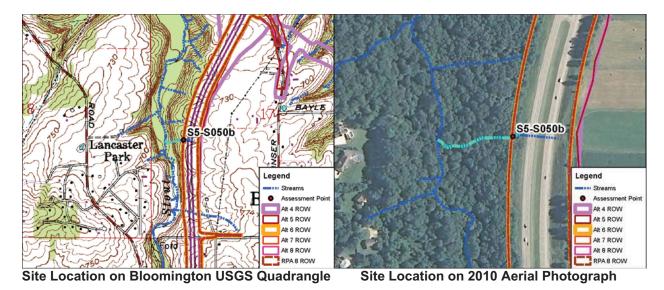
2.5

1.5

Moderate (2 ft/100 ft)

ADDITIONAL STREAM INFOR	MATION (This Information Must A	so be Completed):		55-5046a
QHEI PERFORMED?	Yes No QHEI Score	(If Yes, Atta	ach Completed QHEI Form)
DOWNSTREAM DES WWH Name: Stout Creek CWH Name: EWH Name:	SIGNATED USE(S)		_ Distance from Evaluated Distance from Evaluated Distance from Evaluated	d Stream _
	COPIES OF MAPS, INCLUDING THE	ENTIRE WATERSHE	_	
USGS Quadrangle Name: Bloc	omington	NRCS Soil Map F	Page: NRCS Soil N	Map Stream Order
County: Monroe	Tow	nship / City: Bloom	nington	
MISCELLANEOUS				
Base Flow Conditions? (Y/N):_	Y Date of last precipitation:		Quantity:	
Photograph Information:	_			
Elevated Turbidity? (Y/N):N	Canopy (% open): 10	00%		
Were samples collected for wat	er chemistry? (Y/N): N (Note	lab sample no. or id.	and attach results) Lab Nur	mber:
Field Measures: Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmh	os/cm)
Is the sampling reach represent Additional comments/description		ot, please explain:		
· / — —	N (If Yes, Record all observations. Vouc ID number. Include appropriate field d	•	·	
Fish Observed? (Y/N) N Frogs or Tadpoles Observed? (Comments Regarding Biology:	Voucher? (Y/N) N Salamanders Y/N) N Voucher? (Y/N) N Aqu	Observed? (Y/N) Nuatic Macroinvertebra	Voucher? (Y/N) N tes Observed? (Y/N) N	Voucher? (Y/N) N
	D NARRATIVE DESCRIPTIO arks and other features of interest		`	•
S5-S0	stream Assessment B 148a for site topog al photograph, and	graphic map		





Aquatic Resource: Stream

Stream Name: Unnamed Trib. Stout Creek SW Range: R1W

Range: R1W
Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 48

Legal Drain (Y/N): N

UTME: 1766627 ft **UTMN**: 14240794 ft

USGS Quadrangle: Bloomington

Section: 17
Township: T9N
IDEM 303(d) List: N/A
OHWM Width: 9.0 feet
OHWM Depth: 1.2 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.02 sq mi

Watershed Area: 0.02 sq mi Predominant Sub: Boulder Slabs

Stream S5-S050b –Class II PHWH					
Alternatives	Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acres)				
4	42	0.01	0.05		
5	42	0.01	0.05		
6	42	0.01	0.05		
7	42	0.01	0.05		
8	42	0.01	0.05		
RPA 8	42	0.01	0.05		

Description of Potential Impact:

Impacts to S5-S050b for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists predominantly of boulder slabs. There is a wide forested buffer associated with both stream banks where the Alternatives cross this stream. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S050b are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



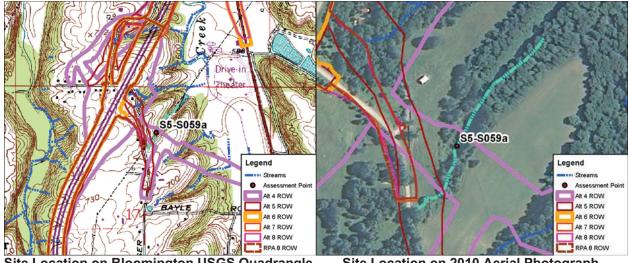
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S050b RIVER BASIN White River DRAINAGE AREA (mi²)	.02
LENGTH OF STREAM REACH (ft) 200 LAT. 39.21385 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KSS COMMENTS (Long: -86.55440) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	OVERY
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Many (20) Additional and the substrate present of the substrate present.)	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
✓ □ BLDR SLABS [16 pts] 80% SILT [3 pt] 0%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] BEDROCK [16 pt]	Substrat
COBBLE (65-256 mm) [12 pts]	Max = 4
☐ GRAVEL (2-64 mm) [9 pts] 11% ☐ MUCK [0 pts] 0% ☐ SAND (<2 mm) [6 pts]	28
Total of Percentages of 89 00% (A) Substrate Percentage 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	Α.5
	D. J.D.
 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 	Pool Dep Max = 3
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 5 cm - 10 cm [15 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
COMMENTS OHW = 9'/1.2' AVERAGE BANKFULL WIDTH (meters): 2.75	20
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
✓ Wide >10m ✓ ✓ Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial	
Field — Open Pasture Row Cro	nn
Narrow <5m Residential, Park, New Field D	7
None Fenced Pasture Mining or Construction COMMENTS	_
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent))
Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None	
STREAM GRADIENT ESTIMATE	
VINEAM ONDIEM EVIMALE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe	00 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	S5-S050]
	and Considered CUST Server)
— —	ach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Stout Creek	Distance from Evaluated Stream
CNALL Norman	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHE	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map	Page: NRCS Soil Map Stream Order
	nington
MISCELLANEOUS	
Base Flow Conditions? (Y/N):Y Date of last precipitation:	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):10%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id.	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution improcess.	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections options	·
ID number. Include appropriate field data sheets from the P	nimary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebra	Voucher? (Y/N)
Comments Regarding Biology:	N
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	· —
Include important landmarks and other features of interest for site evaluation a	nd a narrative description of the stream's location
See Stream Assessment Form	

FLOW -

S5-S050b for site topographic map, aerial photograph, and resource photographs





Site Location on Bloomington USGS Quadrangle

Ephemeral

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek Quarter: NE

Range: R1W Watershed: 05120202010 Channelized/Type: No/Natural

Evaluation Type: HHEI **Evaluation Score:** 42 Legal Drain (Y/N): Ν

Stream Type:

UTME: 1768849 ft **UTMN:** 14243034 ft **USGS** Quadrangle: Bloomington

Section: 17 Township: T9N IDEM 303(d) List: N/A OHWM Width: 6.0 feet OHWM Depth: 1.2 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area: 0.04 sq mi

Sand/cobble **Predominant Sub:**

Stream S5-S059a –Class II PHWH					
Alternatives	Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acres)				
4	330	0.05	0.77		
5	174	0.02	0.41		
6	0	0.00	0.00		
7	0	0.00	0.01		
8	0	0.00	0.01		
RPA 8	0	0.00	0.01		

Description of Potential Impact:

Impacts to S5-S059a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists predominantly of sand, cobble, and silt. There is a wide immature forested buffer associated with both stream banks where the Alternatives 4 and 5 cross this stream. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S059a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



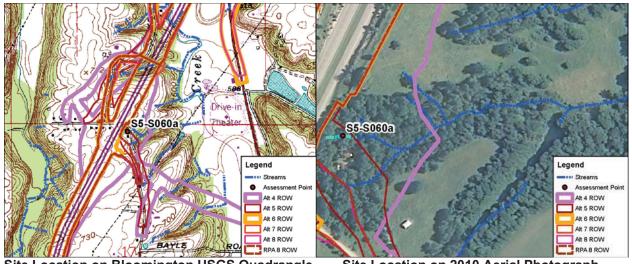
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S059a RIVER BASIN White River DRAINAGE AREA (mi²)	.04
LENGTH OF STREAM REACH (ft) 200 LAT. 39.21997 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KSS COMMENTS (Long: -86.54651) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC MODIFICATIONS:	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts] 10% SILT [3 pt] 15%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] 0% LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% 0%	Substrate
☐ ☐ COBBLE (65-256 mm) [12 pts] ☐ ☐ CLAY or HARDPAN [0 pt] ☐ 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]	22
Ortito (*2 min) [o pto]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 18 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
	Bankfull Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \(\leq 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' AVERAGE BANKFULL WIDTH (meters): 1.82	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 1.82 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 1.82 This information function must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) Wide > 1.0 m (-1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 1.82 L R (Per Bank) L R (Most Predominant per Bank) Moderate 5-10m Moderate 5-10m Moderate 5-10m V V Mide > 10m Moderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): I.82 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Poen Pasture Pow Creen	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 1.82 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Crown Residential, Park, New Field Narrow <5m Residential, Park, New Field Open Pasture, Row Crown Residential, Park, New Field Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m (<=3' 3") [5 pts] 1.82 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Most Predominant per Bank) Riparian Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Open Pasture, Row Crown Penced Pasture FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Moderate, None water (Ephemeral)	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Crown Comments None Fenced Pasture Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermittent) COMMENTS Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 4.0 m (≈ 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (≈ 9' 7" - 14' 8") [20 pts]	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/1.2' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Urban or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Crown Comments None Fenced Pasture Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermittent) COMMENTS Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None	Width Max=30 20

S5-S	059a
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	_
WWH Name: Griffy Creek Distance from Evaluated Stream	-
CWH Name: Distance from Evaluated Stream _	-
EWH Name: Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION	
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: NRCS Soil Map Stream Order	
County: Monroe Township / City: Bloomington	
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation: Quantity:	
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open):0%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with	the cite
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)	tile site
FILEL POYAN N V LONAN N OL LONAN N V LONAN N	7
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) Vouc	
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):	
· —	
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's locat	on

FLOW -

See Stream Assessment Form S5-S059a for site topographic map, aerial photograph, and resource photographs





Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek
Quarter: NE
Page 1941/4

Range: R1W
Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 34

Legal Drain (Y/N): N

UTME: 1768343 ft **UTMN**: 14243839 ft

USGS Quadrangle: Bloomington

Section: 17 Township: T9N IDEM 303(d) List: N/A OHWM Width: 2.2 feet OHWM Depth: 1.0 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area: 0.04 sq mi

Watershed Area: 0.04 sq mi Predominant Sub: Bedrock

	Stream S5	-S060a –Class I PHWH	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	165	0.01	0.07
5	147	0.01	0.07
6	0	0.00	0.01
7	0	0.00	0.01
8	0	0.00	0.01
RPA 8	0	0.00	0.01

Description of Potential Impact:

Impacts to S5-S060a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of bedrock. There is a wide riparian corridor on the left bank and a narrow riparian zone on the right bank where the Alternatives cross this stream. The adjacent floodplain consists of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S060a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



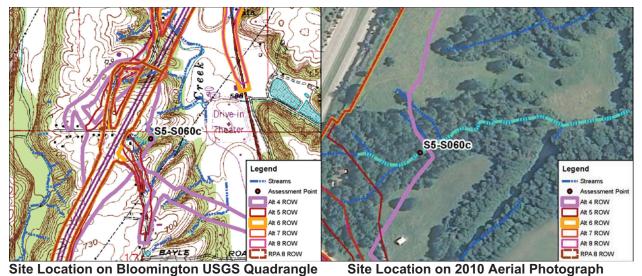
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S060a RIVER BASIN White River DRAINAGE AREA (mi²)	0.04
LENGTH OF STREAM REACH (ft) 165 LAT. 39.22219 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54828) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVE	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHE
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts] 2% CLAY or HARDPAN [0 pt]	Max = 4
☐ GRAVEL (2-64 mm) [9 pts]	24
Table (Percentage)	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 19 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 1	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankful Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' AVERAGE BANKFULL WIDTH (meters): 0.70	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): ###	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): ### AVERAGE BANKFULL WIDTH (meters): ### D.70 ### AVERAGE BANKFULL WIDTH (meters): ### D.70 ### AVERAGE BANKFULL WIDTH (meters): ### D.70 ### D	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Wide >10m Moderate 5-10m Moderate 5-10m Noderate 5-10m Vibran or Industrial	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Cr COMMENTS	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' AVERAGE BANKFULL WIDTH (meters): 0.70 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ⅓NOTE: River Left (L) and Right (R) as looking downstream ⅓ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Double 10 meters) Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mature Forest, Shrub or Old Urban or Industrial V Narrow <5m Residential, Park, New Field Open Pasture, Row Cr None Residential, Park, New Field Mining or Construction COMMENTS Mining or Construction COMMENTS Mining or Construction COMMENTS Mining or Construction Conservation Mining or Construction Mining or Construction Conservation Mining or Construction Mining	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.70 AVERAGE BANKFULL WIDTH (meters): L R (Most Predominant per Bank) L R (Most Predominant	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30

ADDITIONAL STREAM	INFORMATION (This Information	Must Also be Completed):	55-506
QHEI PERFO	PRMED? - Yes V No QHEI S	core (If Yes, Atta	ach Completed QHEI Form)
DOWNSTREA	AM DESIGNATED USE(S)		
WWH Name: Griffy	r Creek		_ Distance from Evaluated Stream
CWH Name: _			_ Distance from Evaluated Stream
EWH Name:			Distance from Evaluated Stream
		NG THE <u>ENTIRE</u> WATERSHEI	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Nam	ne: Bloomington	NRCS Soil Map F	Page: 23 NRCS Soil Map Stream Order
County: Monroe		Township / City: Bloom	nington
MISCELLANE	Eous		
Base Flow Conditions?	(Y/N):_N Date of last precipit	ation:05/12/06	Quantity: 0.39
Photograph Information:	:		
Elevated Turbidity? (Y/N	N): Canopy (% open)	40%	
Were samples collected	d for water chemistry? (Y/N): N	_ (Note lab sample no. or id.	and attach results) Lab Number:
	np (°C) Dissolved Oxygen (ı	mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach re	epresentative of the stream (Y/N) Y	If not, please explain:	
Additional comments/de	escription of pollution impacts:		
BIOTIC EVAI	(If Yes, Record all observation	'	NOTE: all voucher samples must be labeled with the imary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Frogs or Tadpoles Obse	, ,	manders Observed? (Y/N) Aquatic Macroinvertebra	Voucher? (Y/N) Voucher? (Y/N)
Comments Regarding B	Biology:		
DRAWIN	IG AND NARRATIVE DESCR	RIPTION OF STREAM F	REACH (This <u>must</u> be completed):
Include importan	t landmarks and other features of i	nterest for site evaluation ar	nd a narrative description of the stream's location
	See Stream Assessm		
FLOW T	S5-S060a for site	topographic ma	n.



aerial photograph, and resource photographs





Bloomington

17

T9N

Aquatic Resource: Stream USGS Quadrangle:

Stream Name: Unnamed Trib. Griffy Creek Section:
Quarter: NE Township:

Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 2.2 feet Channelized/Type: No/Natural OHWM Depth: 1.0 feet Ephemeral **USCOE Jurisdiction: Stream Type:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 34 Watershed Area: 0.04 sq mi
Legal Drain (Y/N): N Predominant Sub: Bedrock

UTME: 1768775 ft **UTMN**: 14243837 ft

	Stream S5	-S060c –Class I PHWH	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	404	0.02	1.75
5	0	0.00	0.01
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S060c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of bedrock. There is a wide riparian corridor where Alternative 4 crosses this stream. The adjacent floodplain consists of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S060c are on the second page of this form.



Photograph Taken Upstream



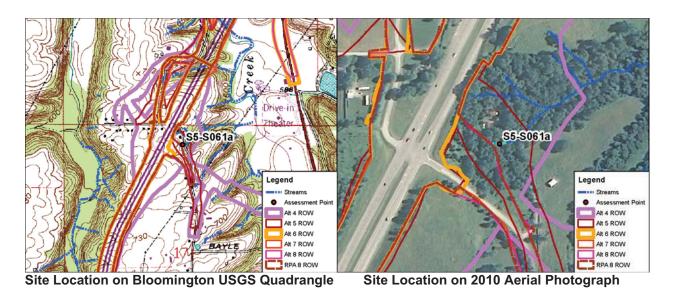
Photograph Taken Downstream



SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S060c RIVER BASIN White River DRAINAGE AREA (mi²)	0.04
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22218 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers (Long: -86.54676) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] 0% SILT [3 pt] 1% BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	Points
BEDROCK [16 pt] 90% FINE DETRITUS [3 pts] 0%	Substrat Max = 4
COBBLE (65-256 mm) [12 pts] 2% CLAY or HARDPAN [0 pt] 0%	IVIAX - 4
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ ARTIFICIAL [3 pts] ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	24
Total of Percentages of Q2 00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	"
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 3
 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] < 5 cm - 10 cm [15 pts] < 5 cm [5 pts] 	l
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 1	
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): ###	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) V Mide >10m Mature Forest, Wetland Conservation Tillage	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) V Wide >10m Moderate 5-10m Moderate 5-10m V Mature Forest, Wetland Urban or Industrial	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOOW REGIME (At Time of Evaluation) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.70 AVERAGE BANKFULL WIDTH (meters	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10m Wide > 10m Moderate 5-10m Narrow <5m None Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.70 AVERAGE BANKFULL WIDTH (meters): 0.70 AVERAGE BANKFULL WIDTH (meters):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Narrow <5 m Narrow <5 m None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 1.0 1.0 1.5 1.5 1.5 1.5 1.5 1.5	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.2' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30

ADDITIONAL STREAM INF	FORMATION (This Information Must A	Iso be Completed):		S5-S060c
QHEI PERFORM	ED? - Yes V No QHEI Score	(If Yes, Atta	ach Completed QHEI Form)	
DOWNSTREAM WWH Name: Griffy Cr CWH Name: _	DESIGNATED USE(S) eek		Distance from Evaluated Distance from Evaluated Distance from Evaluated	Stream _
MAPPING: ATTA	CH COPIES OF MAPS, INCLUDING THE	ENTIRE WATERSHE	DAREA. CLEARLY MARK T	HE SITE LOCATION
USGS Quadrangle Name:	Bloomington	NRCS Soil Map F	Page: 23 NRCS Soil M	lap Stream Order
County: Monroe		wnship / City: Bloom	nington	
MISCELLANEOU Base Flow Conditions? (Y/N Photograph Information:		05/12/06	Quantity: 0.39	
Elevated Turbidity? (Y/N): _	N Canopy (% open):	0%		
Were samples collected for	water chemistry? (Y/N): N (Note	lab sample no. or id.	and attach results) Lab Num	nber:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmho	os/cm)
	iption of pollution impacts:	ot, please explain:		
BIOTIC EVALUA Performed? (Y/N): N Fish Observed? (Y/N) Frogs or Tadpoles Observe Comments Regarding Biologen	(If Yes, Record all observations. Voud ID number. Include appropriate field of Voucher? (Y/N) Salamanders d? (Y/N) Voucher? (Y/N) Aq		imary Headwater Habitat Asse Voucher? (Y/N)	
Include important la	AND NARRATIVE DESCRIPTION Indimarks and other features of interest ee Stream Assessment	for site evaluation and for site evaluation and form	nd a narrative description o	-
	5-S060c for site top erial photograph, an	_	_	





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib. Griffy Creek Section: 17

Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A

Watershed: 05120202010 OHWM Width: 8.0 feet Channelized/Type: No/Natural OHWM Depth: 1.1 feet Ephemeral **USCOE Jurisdiction: Stream Type:** Yes **Evaluation Type: IDEM Jurisdiction:** HHEI Yes **Evaluation Score:** Watershed Area: 0.02 sq mi 51

Legal Drain (Y/N): N Predominant Sub: Boulder slabs/cobble

UTME: 1768401 ft **UTMN**: 14243581 ft

	Stream S5-	S061a – Class II PHWH	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	87	0.02	0.59
5	87	0.02	0.59
6	0	0.00	0.00
7	13	0.01	0.34
8	12	0.01	0.34
RPA 8	11	0.01	0.34

Description of Potential Impact:

Impacts to S5-S061a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of boulder slabs and cobble. There is a wide riparian corridor where the Alternatives cross this stream. The adjacent floodplain consists of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S061a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

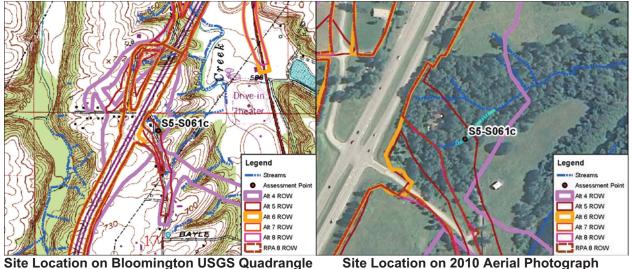


SITE NAME/LOCATION I-69 Section 5 SITE NUMBER S		
SITE AUMADED SI		
STE NUMBER	5-S061a RIVER BASIN White River DRAINAGE AREA (mi²)	.02
LENGTH OF STREAM REACH (ft) 85	LAT. 39.22148 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KS		
		4!
NOTE: Complete All Items On This Form	n - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NAT MODIFICATIONS:	TURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
SUBSTRATE (Estimate percent of ever	rry type of substrate present. Check ONLY two predominant substrate TYPE boxes	
	ant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE
	ERCENT TYPE PERCENT	Metri Point
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]	70% SILT [3 pt] 0% 0% LEAF PACK/WOODY DEBRIS [3 pts] 0%	1 01110
BEDROCK [16 pt]	0% FINE DETRITUS [3 pts]	Substrat
✓ COBBLE (65-256 mm) [12 pts]	20% CLAY or HARDPAN [0 pt] 0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	0% MUCK [0 pts] 0%	04
SAND (<2 mm) [6 pts]	10% ARTIFICIAL [3 pts] 0%	31
Total of Percentages of	Substrate Percentage (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	00.00% (A) Substrate Percentage Check 100% (B)	A+B
SCORE OF TWO MOST PREDOMINATE SUBS	TRATE TYPES: 28 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the ma	paximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
- ,	d culverts or storm water pipes) (Check ONLY one box):	Max = 3
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]	< 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS	MAXIMUM POOL DEPTH (centimeters): 0	
2 DANK FULL MURTH MASS and as the	Charle OM Varia hard	Danlefu
3. BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts]	average of 3-4 measurements) (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfu Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	≤ 1.0 m (<=3' 3") [5 pts]	
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		
, , , , , ,		Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 8'/1.1'	AVERAGE BANKFULL WIDTH (meters): 2.44	Max=30
. , , , , ,	AVERAGE BANKFULL WIDTH (meters): 2.44	Max=30
COMMENTS OHW = 8'/1.1'	AVERAGE BANKFULL WIDTH (meters): 2.44 This information <u>must</u> also be completed	Max=30
. , , , , ,	AVERAGE BANKFULL WIDTH (meters): 2.44 This information <u>must</u> also be completed	Max=30
COMMENTS OHW = 8'/1.1' RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank)	AVERAGE BANKFULL WIDTH (meters): 2.44 This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY LR (Most Predominant per Bank) LR	Max=30
COMMENTS OHW = 8'/1.1' RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH	This information must also be completed PLAIN QUALITY ☆ NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) V Mature Forest, Wetland Conservation Tillage	Max=30
COMMENTS OHW = 8'/1.1' RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank)	AVERAGE BANKFULL WIDTH (meters): 2.44 This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY LR (Most Predominant per Bank) LR	Max=30
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) Vide >10m Moderate 5-10m	This information must also be completed PLAIN QUALITY \$\text{NOTE: River Left (L) and Right (R) as looking downstream}\$\frac{FLOODPLAIN QUALITY}{L R} (Most Predominant per Bank) L R	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Whature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field AVERAGE BANKFULL WIDTH (meters): 2.44 L R Conservation Tillage Urban or Industrial Open Pasture, Row Creen	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) Vide >10m Moderate 5-10m	This information must also be completed PLAIN QUALITY \$\text{NOTE: River Left (L) and Right (R) as looking downstream}\$\frac{FLOODPLAIN QUALITY}{L R} (Most Predominant per Bank) L R	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Whature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Fenced Pasture AVERAGE BANKFULL WIDTH (meters): 2.44 L R Conservation Tillage Urban or Industrial Open Pasture, Row Cro Mining or Construction	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval	This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) Will Mature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old Field Residential, Park, New Field Penced Pasture Mining or Construction Pluation) (Check ONLY one box):	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval	This information must also be completed PLAIN QUALITY	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval	This information must also be completed PLAIN QUALITY	20 20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS	This information must also be completed PLAIN QUALITY	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS	This information must also be completed PLAIN QUALITY	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS SINUOSITY (Number of bends po	This information must also be completed PLAIN QUALITY	20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS SINUOSITY (Number of bends pool 0.5	This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) I Mature Forest, Wetland I Mature Forest, Wetland I Mature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Fenced Pasture Mining or Construction Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) Per 61 m (200 ft) of channel) (Check ONLY one box): 1.0 2.44 AVERAGE BANKFULL WIDTH (meters): 4.41 AVERAGE BANKFULL WIDTH (meters): 4.42 AVERAGE BANKFU	20 20
RIPARIAN ZONE AND FLOODP RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Eval Stream Flowing Subsurface flow with isolated pool COMMENTS SINUOSITY (Number of bends pool	This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ FLOODPLAIN QUALITY L R (Most Predominant per Bank) I Mature Forest, Wetland I Mature Forest, Wetland I Mature Forest, Shrub or Old Field Residential, Park, New Field Residential, Park, New Field Fenced Pasture Mining or Construction Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral) Per 61 m (200 ft) of channel) (Check ONLY one box): 1.0 2.44 AVERAGE BANKFULL WIDTH (meters): 4.41 AVERAGE BANKFULL WIDTH (meters): 4.42 AVERAGE BANKFU	20

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	\$5-\$0618
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Att	ach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) / WWH Name: Griffy Creek CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHE	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map	Page: NRCS Soil Map Stream Order
County: Monroe Township / City: Bloom	nington
MISCELLANEOUS Base Flow Conditions? (Y/N):_Y Date of last precipitation: Photograph Information: Elevated Turbidity? (Y/N):N Canopy (% open):10% Were samples collected for water chemistry? (Y/N):N (Note lab sample no. or id. Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections options ID number. Include appropriate field data sheets from the P Fish Observed? (Y/N) N Salamanders Observed? (Y/N) N Salamanders Observed? (Y/N) N Aquatic Macroinvertebra Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM	Voucher? (Y/N) N Vouche
See Stream Assessment Form S5-S061a for site topographic magaerial photograph, and resource p	٥,

Save as pdf





Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek Quarter: NW

Range: R1W

Watershed: 05120202010 Channelized/Type: No/Natural Ephemeral **Stream Type: Evaluation Type:** HHEI 30

Evaluation Score: Legal Drain (Y/N): Ν

UTME: 1768511 ft **UTMN:** 14243619 ft **USGS** Quadrangle: Bloomington

Section: 17 Township: T9N IDEM 303(d) List: N/A OHWM Width: 2.9 feet OHWM Depth: 1.1 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area: 0.02 sq mi

Predominant Sub: Bedrock

Stream S5-S061c – Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	273	0.02	0.46
5	102	0.01	0.28
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S061c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of bedrock. There is a wide riparian corridor where Alternatives 4 and 5 cross this stream. The adjacent floodplain consists of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S061c are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

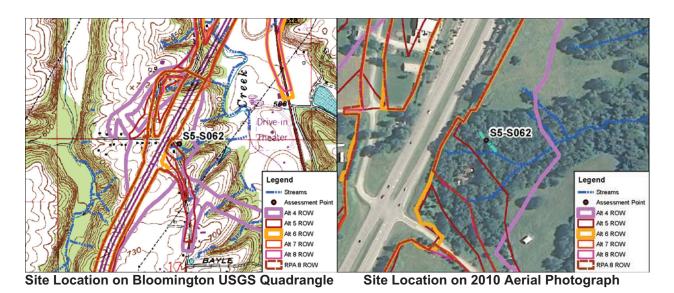
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S061c RIVER BASIN White River DRAINAGE AREA (mi²)	0.02
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22158 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54770) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
□ □ BLDR SLABS [16 pts] □ □ SILT [3 pt] 1%	Points
BOULDER (>256 mm) [16 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 2% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 1% MUCK [0 pts] 0%	25
SAND (<2 mm) [6 pts]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 93.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 19 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): 0.88	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): 0.88 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30 5
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30 5
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30 5
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.0' / 1.1' OHW -	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.88 RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (<=3' 8") [15 pts] AVERAGE BANKFULL WIDTH (meters): O.88 COMMENTS RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m (V=2) / Mature Forest, Wetland (Conservation Tillage (Immature Forest, Shrub or Old (Immatu	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7' - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7' - 13') [20 pts] COMMENTS OHW - 2.9' / 1.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Noderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 0.5 1.5 1.0 1.0 1.0 1.0 1.0 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (< 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 2 / 8'') [15 pts] > 1.0 m < - 1.5 m < - 1.5 m < - 2 / 8'') [15 pts] > 1.0 m < - 1.5 m < - 2 / 8'' 8'') [15 pts] > 1.0 m < - 1.5 m < - 2 / 8'' 8'' [15 pts] > 1.0 m < - 1.5 m < - 2 / 8'' 8'' [15 pts] > 1.0 m < - 1.5 m < - 2 / 8'' 8'' [15 pts] > 1.0 m < - 1.5 m < - 2 / 8'' 8'' [15 pts] > 1.0 m < - 1.5 m < - 2 / 8'' 8'' [15 pts] AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.1' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): OHW - 2.0' / 1.0' OHW - 2.0' /	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Griffy Creek Distance from Evaluated Stream
CWH Name: Distance from Evaluated Stream
EWH Name:
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: 23 NRCS Soil Map Stream Order 1
County: Monroe Township / City: Bloomington
MISCELLANEOUS
Base Flow Conditions? (Y/N):_N Date of last precipitation:_ 05/12/06 Quantity:_ 0.39
Photograph Information: 115 Upstream / 119 Downstream / 117 Right bank / 118 Left bank
Elevated Turbidity? (Y/N): N Canopy (% open): 40%
Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Vo
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW -

See Stream Assessment Form S5-S061c for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream **USGS** Quadrangle: Bloomington

Stream Name: Unnamed Trib. Griffy Creek Section:

17 Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A

Watershed: 05120202010 OHWM Width: 2.0 feet Channelized/Type: No/Natural OHWM Depth: 1.0 feet Ephemeral **USCOE Jurisdiction: Stream Type:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 43 Watershed Area: 0.01 sq mi Legal Drain (Y/N): Ν **Predominant Sub:** Cobble

UTME: 1768463 ft **UTMN:** 14243895 ft

Stream S5-S062 – Class II PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	140	0.01	0.30
5	0	0.00	0.00
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S062 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists predominantly of cobble. There is a wide riparian buffer associated with this stream. The floodplain consists of mature forest on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S062 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



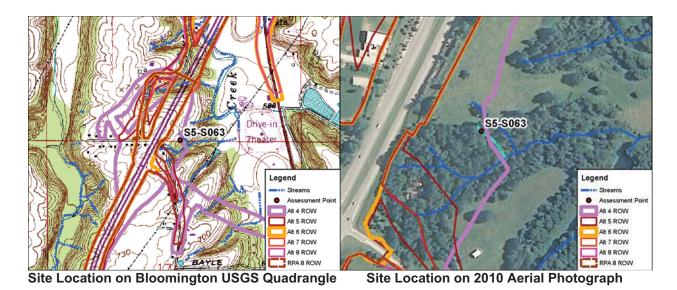
ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S062 RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ft) 140 LAT. 39.22234 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54786) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 2%	Points
BOULDER (>256 mm) [16 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 80% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 3% MUCK [0 pts] 0%	33
SAND (<2 mm) [6 pts]	
Total of Percentages of 90.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 28 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 1	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) V Wide > 10m Moderate 5-10m Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m P 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.60 L R (Most Predominant per Bank) V Wide >10 mature Forest, Wetland Urban or Industrial Field	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30 5
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m P 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.60 L R (Most Predominant per Bank) V Wide >10 mature Forest, Wetland Urban or Industrial Field	Width Max=30 5
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' AVERAGE BANKFULL WIDTH (meters):	Width Max=30 5
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Most Predominant per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitter	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.60 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And Telephone Telephone Telephone RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.60 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And Telephone Telephone RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.60 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And Telephone Telephone Telephone Telephone RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And Telephone Telephone RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And Telephone RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And Telephone RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Conservation Tillage Urban or Industrial Open Pasture, Row Conservation None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY MoTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also be Comp	oleted):
QHEI PERFORMED? - Yes V No QHEI Score (If	Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Griffy Creek CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WAT	TERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS S	oil Map Page: 23 NRCS Soil Map Stream Order
County: Township / City:	Bloomington
MISCELLANEOUS Base Flow Conditions? (Y/N): N Date of last precipitation: 05/12/0 Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 30% Were samples collected for water chemistry? (Y/N): N (Note lab sample in	Quantity: 0.39 o. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH Is the sampling reach representative of the stream (Y/N) If not, please ex Additional comments/description of pollution impacts:	plain:
ID number. Include appropriate field data sheets from Voucher? (Y/N) Salamanders Observed?	s optional. NOTE: all voucher samples must be labeled with the site om the Primary Headwater Habitat Assessment Manual) (Y/N) Voucher? (Y/N) Voucher? (Y/N)
DRAWING AND NARRATIVE DESCRIPTION OF STE	·
S5-S062 for site topographi aerial photograph, and reso	

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Reset Form



Aquatic Resource: Stream
Stream Name: Unnamed Trib. Griffy Creek

Quarter: SE Range: R1W

Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 43

Legal Drain (Y/N): N

UTME: 1768703 ft **UTMN**: 14244015 ft

USGS	Quadrangle:	Bloomington
	addarding:	Dioonington

Section: 8
Township: T9N
IDEM 303(d) List: N/A
OHWM Width: 1.9 feet
OHWM Depth: 1.0 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.01 sq mi

Watershed Area: 0.01 sq mi
Predominant Sub: Bedrock

Stream S5-S063 – Class II PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	82	0.01	0.29
5	0	0.00	0.00
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S063 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists predominantly of bedrock. There is a moderately-wide riparian buffer where Alternative 4 crosses this stream. The floodplain consists of mature forest on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S063 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form

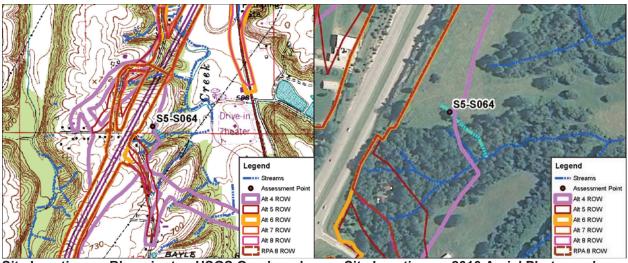
43

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S063 DRAINAGE AREA (mi²) 0.01 SITE NUMBER 200 LAT. **39.22267** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.54701) (Natural-Class II) DATE 05/12/06 A Rogers SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 0% 1% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 2% 0% **Substrate** 90% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 400% COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 2% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 33 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 95.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 28 TOTAL NUMBER OF SUBSTRATE TYPES: 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **FLOODPLAIN QUALITY** RIPARIAN WIDTH (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box) Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 2.5 >3 STREAM GRADIENT ESTIMATE ✓ Moderate to Severe Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STRE	EAM INFORMATION (This Information Must Al	so be Completed):		S5-S063
QHEI PEI	RFORMED? - Yes No QHEI Score	(If Yes, Atta	ach Completed QHEI Form)	
DOWNST WWH Name: G CWH Name: EWH Name:	TREAM DESIGNATED USE(S) Griffy Creek		Distance from Evaluated Solitance from Evaluated Solitance from Evaluated Solitance from Evaluated Solitance	Stream _
	G: ATTACH COPIES OF MAPS, INCLUDING THE		_	
	Name: Bloomington	NRCS Soil Map F	22	ap Stream Order
County: Monroe		nship / City: Bloom	ington	
		05/12/06	Quantity: 0.39	
Elevated Turbidity?	(Y/N): _ N	5%		
Were samples colle	ected for water chemistry? (Y/N): N (Note	lab sample no. or id.	and attach results) Lab Num	ber:
	Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmho	s/cm)
	ch representative of the stream (Y/N) If n			
Performed? (Y/N): _ Fish Observed? (Y/Frogs or Tadpoles Comments Regarding	ID number. Include appropriate field d (N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Aqu	•	imary Headwater Habitat Asse Voucher? (Y/N)	
	wing AND NARRATIVE DESCRIPTIOn of the stand of the features of interest see Stream Assessment S5-S063 for site topogaerial photograph, and	for site evaluation an Form raphic map,	nd a narrative description of	

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Reset Form



Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek
Quarter: SE
Range: R1W

Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 38

Legal Drain (Y/N): N

UTME: 1768691 ft **UTMN**: 14244134 ft

USGS Quadrangle: Bloomington

Section: 8
Township: T9N
IDEM 303(d) List: N/A
OHWM Width: 1.9 feet
OHWM Depth: 1.0 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.01 sq mi

Watershed Area: 0.01 sq m Predominant Sub: Bedrock

Stream S5-S064 – Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	102	0.01	0.19
5	0	0.00	0.00
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S064 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately bedrock. There is a wide riparian buffer associated with this stream. The floodplain consists of mature forests on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S064 are on the second page of this form.



Photograph Taken Upstream





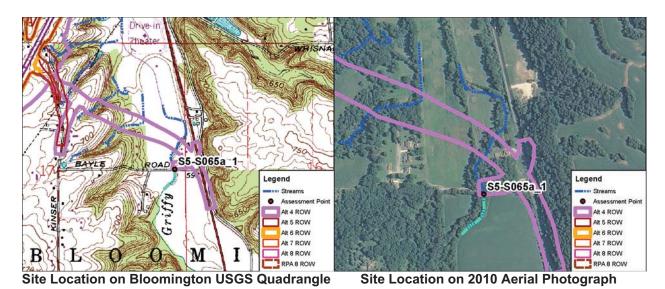
ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S064 RIVER BASIN White River DRAINAGE AREA (mi²)	.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22300 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54705) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERE	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] 0% SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] 2%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt]	Substrat
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	33
Orato (2 min) [o pto]	
Total of Percentages of 95.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 28 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW - 1.9' / 1.0' AVERAGE BANKFULL WIDTH (meters): 0.70	5
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest Wetland Conservation Tillage	
✓ Wide >10m ✓ ✓ Mature Forest, Wetland ✓ Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial	
Field — Open Pasture Pow Cr	nn.
Narrow <5m Residential, Park, New Field D	ЭР
None Fenced Pasture Mining or Construction COMMENTS	_
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)
Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 2.0 3.0 >3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe Severe (10 ft/1	
	00 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Complete	<u>55-5064</u>
QHEI PERFORMED? - Yes V No QHEI Score (If Yes	s, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Griffy Creek CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATER	SHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil N	Map Page: 23 NRCS Soil Map Stream Order
County: Monroe Township / City:	Bloomington
MISCELLANEOUS	
Base Flow Conditions? (Y/N): N Date of last precipitation: 05/12/06	Quantity: 0.39
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 25%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. of	or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.	U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain	in:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data sheets from to Voucher? (Y/N) Salamanders Observed? (Y/N)	Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) AM REACH (This must be completed):
See Stream Assessment Form S5-S064 for site topographic ma aerial photograph, and resource	

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Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: **Griffy Creek** Section: 17 Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A OHWM Width: Watershed: 05120202010 4.4 feet

Channelized: No OHWM Depth: 6.5 feet Stream Type: Perennial USCOE Jurisdiction: Yes Evaluation Type: QHEI IDEM Jurisdiction: Yes Evaluation Score: 61.5 Watershed Area: 12.49 sc

Evaluation Score: 61.5 **Watershed Area:** 12.49 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Gravel/sand

UTME: 1761019 ft **UTMN**: 14241418 ft

	Stream S5-S06	5a_1 – Warm Water Habitat	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	32	0.03	0.03
5	0	0.00	0.00
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S065a_1at this location for the Alternatives are listed in the table above. Segments S5-S065a_1 and S5-S065a_3 were evaluated together. Segment S5-S065a_1 is upstream of the Bayles Road culverts and S5-S065a_3 is downstream of the road crossing. At the time of evaluation, this stream is a perennial stream with good habitat development and moderate sinuosity. The predominant substrate consists of gravel and sand. The stream has a wide riparian corridor associated with both banks. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5-S065a_3 segment are on the second page of this form. Implementation of the RPA 8 will decrease the amount of impacts at this location.



Photograph Taken Upstream



Photograph Taken Downstream

SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate % and check every type present. BEST TYPES OOTHUR TYPES ORIGIN QUALITY PRESENT TOTAL % PREDOMINANT PRESENT TOTAL % TILLS[1] SOURCE, P R P R HARDPAN [4] R TILLS[1] SOURCE, P R HEAVY[-2] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [5] OOBEL [8] D R ARTHROLL, [0] RESENT TOTAL % PREDOMINANT RESENT TOTAL % PRESENT TOTAL %	Sample #		bioSample #	Stream Name		Location	
SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate the control of the control			Country				
SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate % and check every type present. BEST TYPES OOTHUR TYPES ORIGIN QUALITY PRESENT TOTAL % PREDOMINANT PRESENT TOTAL % TILLS[1] SOURCE, P R P R HARDPAN [4] R TILLS[1] SOURCE, P R HEAVY[-2] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [5] OOBEL [8] D R ARTHROLL, [0] RESENT TOTAL % PREDOMINANT RESENT TOTAL % PRESENT TOTAL %				Macro Sample Type		QHEI Score:	61.5
MODERATE 25-75% [3] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] NORE [2] NORE [2	BEST TYPE BEST TYPE BEDOMINANT R BLDR/SLABS[: BOULDER[9] COBBLE[8] GRAVEL[7] SAND [6] BEDROCK[5] UMBER OF BEST UMBER OF BEST JINSTREAM Collabity; 2-Moderate an idlity in moderate or	Check ONLY Two prestimate % and set imate % an	redominant substratcheck every type professional professi	PRESENT TOTAL % PRESENT TOTAL	Check ONE (CIGIN STONE [1] [1] [1] [ANIDS [0] [ANIDS [0] [AP [0] [AP [0] [FINES [-2] [FINES [-2] [7: 3-Highest diameter log	Or 2 & average) QUALITY S HEAVY [-2] I MODERATE [-1] NORMAL [0] FREE [1] MODERATE [-1] MODERATE [-1] MODERATE [-1] NONE [1] S or if more common of machine amount Check ONE (Or 2 &	Substrated 12 12 12 12 12 12 12 1
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BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) River right looking downstream RIPARIAN WIDTH CHeck ONE (On 2 & average) DOMORPATE [2] NARROW 5-10m [2] SHRUB OR OLD FIELD [2] URBAN OR INDUSTRIAL [0] WIDDING / CONSTRUCTION Indicate predominant land use(s) Riparian Maximum 10 DOMORPATE [2] NONE [0] CHECK ALL that apply (Gride one and comment on the construction of riffle-obligate species: Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: INDICATE POOL / GLIDE AND RIPHE WIDTH (D.C.) A severage) Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: INDICATE POOL / GLIDE RIPH RUN QUALITY (DAY NO) (DAY	SINUOSITY HIGH[4] MODERATE[3] LOW[2] NONE[1]	DEVELO DEVCELO GOOD FAIR [3	PMENT ENT[7] [5]	CHANNELIZATION NONE [6] RECOVERED[4] RECOVERING [3]	HIGH	H[3] DERATE[2] Chan V[1] Maxim	um 1/
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	of riffle-obligate spi RIFFLE DEPTH BEST AREAS > 10 BEST AREAS 5 - 10 BEST AREAS < 50	RUN D cm[2]	EPTH MUM > 50cm [2]	Check ONE (Or 2 & average) RIFFLE/RUN SUBSTRAT STABLE (e.g., Cobble, Boulde MOD. STABLE (e.g., Large G	er)[2]	NONE [2] LOW [1] RIFFI MODERATE [0] RIFFI	NESS e/ un 5
MODERATE [6-10] Maximum	GRADIENT (8 ft/mi)			15 %GLI		

OHW = HH'X 6.5"

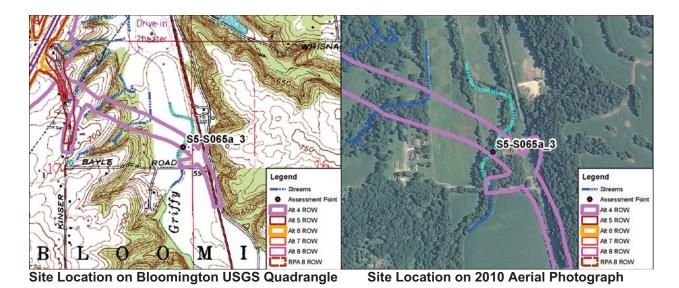
IDEM 07/06/10

s 65a-1, -2,-3

Sample #	bioSam	ple#	Stream Name		Locati	'on
Surveyor	Sample Date	County	Orff.	Macro SampleType	Habitat Complete	QHEI Score 61,5
	None Industrial WWTP Agricultural Livestock Silviculture Construction Urban Runoff	Subi Chai Ripa Flow CSO Mini Lanc	nnelization rian Removal Alteration s ng	Subjective ration Aesthetic ration Canopy Cover (Signeral QHEI Note)	ng (1-10): Q ng (1-10): Q % Open): 50	ws QHEI Information % Riffle: 40 Is reach representative of stream? Yes % Glide: 45 % Pool: 15

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For the Parties of the Control of th



Aquatic Resource:StreamUSGS Quadrangle:BloomingtonStream Name:Griffy CreekSection:17Quarter:SETownship:T9N

Township: Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 4.4 feet Channelized: No OHWM Depth: 6.5 feet Stream Type: **USCOE** Jurisdiction: Perennial Yes **Evaluation Type: IDEM Jurisdiction:** QHEI Yes

Evaluation Score: 61.5 **Watershed Area:** 12.49 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Gravel/sand

UTME: 1761019 ft **UTMN**: 14241418 ft

	Stream S5-S06	5a_3 – Warm Water Habitat	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	321	0.32	0.45
5	0	0.00	0.00
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts S5-S065a_3 at this location for the Alternatives are listed in the table above. Segments S5-S065a_3 and S5-S065a_1 were evaluated together. Segment S5-S065a_1 is upstream of the Bayles Road culverts and S5-S065a_3 is downstream of the road crossing. At the time of evaluation, this stream is a perennial stream with good habitat development and moderate sinuosity. The predominant substrate consists of gravel and sand. The stream has a wide riparian corridor associated with both banks. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5-S065a_3 segment are on the second page of this form. Implementation of the RPA 8 will decrease the amount of impacts at this location.



Photograph Taken Upstream



Photograph Taken Downstream

SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate % and check every type present. BEST TYPES OOTHUR TYPES ORIGIN QUALITY PRESENT TOTAL % PREDOMINANT PRESENT TOTAL % TILLS[1] SOURCE, P R P R HARDPAN [4] R TILLS[1] SOURCE, P R HEAVY[-2] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [5] OOBEL [8] D R ARTHROLL, [0] RESENT TOTAL % PREDOMINANT RESENT TOTAL % PRESENT TOTAL %	Sample #		bioSample #	Stream Name		Location	
SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate the control of the control			Country				
SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate % and check every type present. BEST TYPES OOTHUR TYPES ORIGIN QUALITY PRESENT TOTAL % PREDOMINANT PRESENT TOTAL % TILLS[1] SOURCE, P R P R HARDPAN [4] R TILLS[1] SOURCE, P R HEAVY[-2] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [4] R TILLS[1] SOURCE, P R HARDPAN [5] OOBEL [8] D R ARTHROLL, [0] RESENT TOTAL % PREDOMINANT RESENT TOTAL % PRESENT TOTAL %				Macro Sample Type		QHEI Score:	61.5
MODERATE 25-75% [3] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] SPARSE 5-25% [3] AQUATIC MACROPHYTES [1] NEARLY ABSENT < 5% [2] OXBOWS, BACKWATERS [1] NORE [2] NORE [2	BEST TYPE BEST TYPE BEDOMINANT R BLDR/SLABS[: BOULDER[9] COBBLE[8] GRAVEL[7] SAND [6] BEDROCK[5] UMBER OF BEST UMBER OF BEST JINSTREAM Collabity; 2-Moderate an idlity in moderate or	Check ONLY Two prestimate % and set imate % an	redominant substratcheck every type professional professi	PRESENT TOTAL % PRESENT TOTAL	Check ONE (CIGIN STONE [1] [1] [1] [ANIDS [0] [ANIDS [0] [AP [0] [AP [0] [FINES [-2] [FINES [-2] [7: 3-Highest diameter log	Or 2 & average) QUALITY S HEAVY [-2] I MODERATE [-1] NORMAL [0] FREE [1] MODERATE [-1] MODERATE [-1] MODERATE [-1] NONE [1] S or if more common of machine amount Check ONE (Or 2 &	Substrated 12 12 12 12 12 12 12 1
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BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) River right looking downstream RIPARIAN WIDTH CHeck ONE (On 2 & average) DOMORPATE [2] NARROW 5-10m [2] SHRUB OR OLD FIELD [2] URBAN OR INDUSTRIAL [0] WIDDING / CONSTRUCTION Indicate predominant land use(s) Riparian Maximum 10 DOMORPATE [2] NONE [0] CHECK ALL that apply (Gride one and comment on the construction of riffle-obligate species: Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: INDICATE POOL / GLIDE AND RIPHE WIDTH (D.C.) A severage) Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: INDICATE POOL / GLIDE RIPH RUN QUALITY (DAY NO) (DAY	SINUOSITY HIGH[4] MODERATE[3] LOW[2] NONE[1]	DEVELO DEVCELO GOOD FAIR [3	PMENT ENT[7] [5]	CHANNELIZATION NONE [6] RECOVERED[4] RECOVERING [3]	HIGH	H[3] DERATE[2] Chan V[1] Maxim	um 1/
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POOL/GLIDE AND RIFFLE/RUN QUALITY MAXIMUM DEPTH CHANNEL WIDTH Check ONE (ONLY!) Check ONE (OT 2 & average) Check ALL that apply (Gride one and comment on the comment of t	River right looking down R EROSION NONE/LITTLE MODERATE [2]	RIP/ WIDE MODI	ARIAN WIDTH > 50m[4] ERATE 10-50m[3] OW 5-10m[2] NARROW[1] :[0]	L R FLOOD PLAIN QU M FOREST, SWAMP [3] SHRUB OR OLD FIELD RESIDENTIAL, PARK, N FENCED PASTURE [1]	[2] [[EW FIELD [1] [Indica	CONSERVATION TO URBAN OR INDUST URBAN OR INDUST URBAN OR INDUST CONSTRUCT DEPTOR OF THE CONSTRUCT TO URBAN OR INDUST URBAN OR INDUST TO URBAN OR I	RIAL [0] OCTION [0]
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	of riffle-obligate spi RIFFLE DEPTH BEST AREAS > 10 BEST AREAS 5 - 10 BEST AREAS < 50	RUN D cm[2]	EPTH MUM > 50cm [2]	Check ONE (Or 2 & average) RIFFLE/RUN SUBSTRAT STABLE (e.g., Cobble, Boulde MOD. STABLE (e.g., Large G	er)[2]	NONE [2] LOW [1] RIFFI MODERATE [0] RIFFI	NESS e/ un 5
MODERATE [6-10] Maximum	GRADIENT (8 ft/mi)			15 %GLI		

OHW = HH'X 6.5"

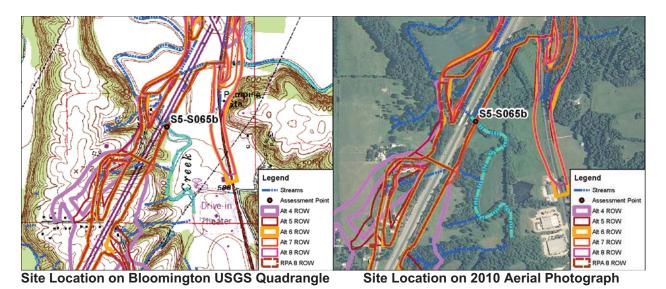
IDEM 07/06/10

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Sample #	bioSam	ple#	Stream Name		Locati	'on
Surveyor	Sample Date	County	Orff.	Macro SampleType	Habitat Complete	QHEI Score 61,5
	None Industrial WWTP Agricultural Livestock Silviculture Construction Urban Runoff	Subi Chai Ripa Flow CSO Mini Lanc	nnelization rian Removal Alteration s ng	Subjective ration Aesthetic ration Canopy Cover (Signeral QHEI Note)	ng (1-10): Q ng (1-10): Q % Open): 50	ws QHEI Information % Riffle: 40 Is reach representative of stream? Yes % Glide: 45 % Pool: 15

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For the Parties of the Control of th



Aquatic Resource:StreamUSGS Quadrangle:BloomingtonStream Name:Griffy CreekSection:8

Griffy Creek Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 **OHWM Width:** 52.0 feet Channelized: **OHWM Depth:** 13.0 feet Yes

Stream Type:PerennialUSCOE Jurisdiction:YesEvaluation Type:QHEIIDEM Jurisdiction:YesEvaluation Score:37Watershed Area:14.10 sq mi

Legal Drain (Y/N): N Predominant Sub: Silt

UTME: 1769250 ft **UTMN**: 14246108 ft

	Stream S5-S065b -	· Modified Warm Water Habi	itat
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	113	0.13	0.32
5	115	0.14	0.33
6	102	0.12	0.27
7	137	0.16	0.42
8	102	0.12	0.27
RPA 8	102	0.12	0.27

Description of Potential Impact:

Impacts to S5-S065b at this location for the Alternatives are listed in the table above. Segments S5-S065b, S5-S065c, and S5-S065d were evaluated together. Segment S5-S065b is upstream of the existing SR 37 bridge, S5-S065c is the portion of stream being bridged, and S5-S065d is downstream of the bridge. These segments have experienced previous disturbance and exhibit no recovery at the time of the evaluation. This stream is a perennial stream with poor habitat development and low to no sinuosity where these Alternatives cross this stream. The predominant substrate consists of silt. The stream has a moderately wide riparian corridor associated with both banks. The adjacent floodplain is dominated by an old field. Photographs taken upstream and downstream for this location at S5-S065b are on the second page of this form. Implementation of the RPA 8 will decrease the amount of impacts to Griffy Creek at this location.



Photograph Taken Upstream

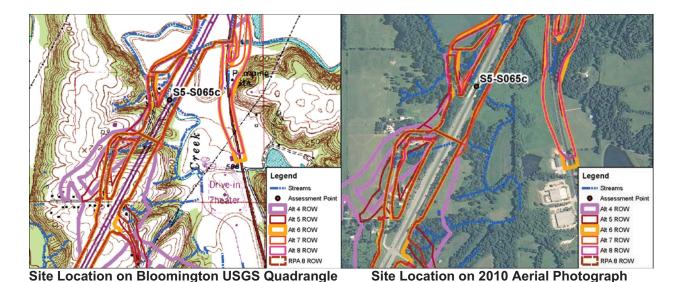


Photograph Taken Downstream

Secs-565 b, c, d

	Stream Name	Locatio	
	GRIFFEY CRE		
rveyor Sample Date County		eType Habitat	QHEI Score: 37
	maximum)	Complete	A
Substrate (20 points		3 6	Substrate Score: 1
Check 1 Predominant Pool 8		Substrate Quality (chec	k only 1, or check 2 and AVERAGE)
Check all that are present	P=Pool, R=Riffle	to the same	Substrate Origin
redominant Present	Predominant Present	Limestone(1)	☐ Hardpan(0) ☐ Lacustrine(0)
P R P R	PR PR	[[Tills(1)	Sandstone(0) Shale(-1)
Bldrs/Slabs(10)	Hardpan(4)		☐Rip/Rap(0) ☐ Coal fines(-2)
Boulders(9)	Detritus(3)	Silt Cover	Embeddedness
Cobble(8)	Muck(2)	Usilt heavy(-2)	①Extensive(-2)
Gravel(7)	☑ Sin(2) ☐ ☐	Silt moderate(-	The state of the s
Sand(6)	Sludge(1)	Silt normal(0)	Low/Normal(0)
Bedrock(5) TE: ignore sludge originating f	☐ ☐ Artificial(0) ☐ ☐ from point	Silt free(1)	None(1)
urces; score based on natural s		+2=6(-5)	28,111,000
nite in the second seco	Comments. I	14-6 (-3)	
Instream Cover (20 p	onus maximum	17/41	Instream Cover Score: 8
ype (check ALL that apply)			int (check only 1, or 2 and AVERAGE)
Undercut banks(1)	Deep pools(2) Oxbows		Extensive >75% (11)
Overhanging vegetation(1)		macrophytes(1)	Moderate 25-75% (7)
Shallows(in slow water)(1) Rootmats(1) Commen		d woody debris(1)	Sparse 5-25% (3) Nearly absent <5% (1)
	1910	15 t 22 1 1 1 1 8 6 5 1 1 1 1 1	
Channel Morphology	(20) (check only one per cate)	gory, OR two and AVERA	GE) Channel Score: 5
inuosity Development	Channelization	Stability Mo	odifications/Other
High (4) Excellent ((7) None (6)	SCHOOL SECTION	Snagging Impound
Moderate (3) Good (5)	Recovered (4)		Relocation Islands
Low (2) Fair (3)	Recovering (3)		
		The state of the s	Canopy RemovalLeveed
None (1) Poor (1)	Recent or no recovery (1)	Dredging Bank shaping
		1)	
Mone (1) Poor (1)		1)	Dredging Bank shaping
Mone (1) Poor (1) mments: Riparian Zone & Ban	k Erosion (10 points m	aximum)	Dredging Bank shaping One side channel modifications Riparian Score: 5
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down	Recent or no recovery (aximum) k only one per bank, OR	Dredging Bank shaping One side channel modifications Riparian Score: 5
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down	Recent or no recovery (k Erosion (10 points m stream (For each category, check	aximum) k only one per bank, OR past 100 ft Riparian)	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AYERAGE).
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down tiparian width R (per bank)	k Erosion (10 points m	aximum) k only one per bank, OR past 100 ft Riparian)	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AVERAGE). Bank Erosion L R (per bank)
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down tiparian width R (per bank) Wide >50m (4)	Recent or no recovery (k Erosion (10 points m nstream (For each category, check roslon/Runoff-Floodplain quality (R (most predominant per bank)	axirnum) k only one per bank, OR past 100 ft Riparian) L R	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AYERAGE). Bank Erosion L. R. (per bank) Tillage (1)
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking dowr tiparian width R (per bank) UWide >50m (4)	k Erosion (10 points mestream (For each category, check rosion/Runoff-Floodplain quality (in R (most predominant per bank) Forest, Swamp (3)	aximum) k only one per bank, OR past 100 ft Riparian) L R Conservation Urban or Indu Mining, Const	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AVERAGE). Bank Erosion L R (per bank) Tillage (1) None or little (3) strial (0) Moderate (2) ruction (0) Heavy/Severe (1)
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Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: **Griffy Creek** Section: Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 **OHWM Width:** 52.0 feet Channelized: OHWM Depth: 13.0 feet Yes

Stream Type:PerennialUSCOE Jurisdiction:YesEvaluation Type:QHEIIDEM Jurisdiction:YesEvaluation Score:37Watershed Area:14.10 sq mi

Legal Drain (Y/N): N Predominant Sub: Silt

UTME: 1769250 ft **UTMN**: 14246108 ft

	Stream S5-S065c -	- Modified Warm Water Habi	tat
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	135	0.16	0.01
5	135	0.16	0.01
6	135	0.16	0.01
7	135	0.16	0.01
8	135	0.16	0.01
RPA 8	135	0.16	0.01

Description of Potential Impact:

Impacts to S5-S065c at this location for the Alternatives are listed in the table above. Segments S5-S065c, S5-S065b, and S5-S065d were evaluated together. Segment S5-S065b is upstream of the existing SR 37 bridge, S5-S065c is the portion of stream being bridged, and S5-S065d is downstream of the bridge. These segments have experienced previous disturbance and exhibit no recovery at the time of the evaluation. This stream is a perennial stream with poor habitat development and low to no sinuosity where these Alternatives cross this stream. The predominant substrate consists of silt. The stream has a moderately wide riparian corridor associated with both banks. The adjacent floodplain is dominated by an old field. Photographs taken upstream and downstream for this location at S5-S065b are on the second page of this form.



Photograph Taken Upstream

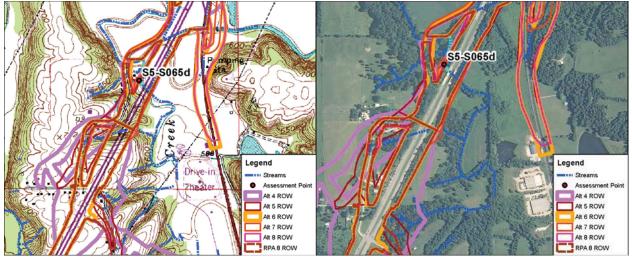


Photograph Taken Downstream

Secs-565 b, c, d

	Stream Name	Locatio	
	GRIFFEY CRE		
rveyor Sample Date County		eType Habitat	QHEI Score: 37
	maximum)	Complete	A
Substrate (20 points		3 6	Substrate Score: 1
Check 1 Predominant Pool 8		Substrate Quality (chec	k only 1, or check 2 and AVERAGE)
Check all that are present	P=Pool, R=Riffle	to the same	Substrate Origin
redominant Present	Predominant Present	Limestone(1)	☐ Hardpan(0) ☐ Lacustrine(0)
P R P R	PR PR	[[Tills(1)	Sandstone(0) Shale(-1)
Bldrs/Slabs(10)	Hardpan(4)		☐Rip/Rap(0) ☐ Coal fines(-2)
Boulders(9)	Detritus(3)	Silt Cover	Embeddedness
Cobble(8)	Muck(2)	Usilt heavy(-2)	①Extensive(-2)
Gravel(7)	☑ Sin(2) ☐ ☐	Silt moderate(-	The state of the s
Sand(6)	Sludge(1)	Silt normal(0)	Low/Normal(0)
Bedrock(5) TE: ignore sludge originating f	☐ ☐ Artificial(0) ☐ ☐ from point	Silt free(1)	None(1)
urces; score based on natural s		+2=6(-5)	28,111,000
nite in the second seco	Comments. I	14-6 (-3)	
Instream Cover (20 p	onus maximum	17/41	Instream Cover Score: 8
ype (check ALL that apply)			int (check only 1, or 2 and AVERAGE)
Undercut banks(1)	Deep pools(2) Oxbows		Extensive >75% (11)
Overhanging vegetation(1)		macrophytes(1)	Moderate 25-75% (7)
Shallows(in slow water)(1) Rootmats(1) Commen		d woody debris(1)	Sparse 5-25% (3) Nearly absent <5% (1)
	1910	15 t 22 1 1 1 1 8 6 5 1 1 1 1 1	
Channel Morphology	(20) (check only one per cate)	gory, OR two and AVERA	GE) Channel Score: 5
inuosity Development	Channelization	Stability Mo	odifications/Other
High (4) Excellent ((7) None (6)	SCHOOL SECTION	Snagging Impound
Moderate (3) Good (5)	Recovered (4)		Relocation Islands
Low (2) Fair (3)	Recovering (3)		
		The state of the s	Canopy RemovalLeveed
None (1) Poor (1)	Recent or no recovery (1)	Dredging Bank shaping
		1)	
Mone (1) Poor (1)		1)	Dredging Bank shaping
Mone (1) Poor (1) mments: Riparian Zone & Ban	k Erosion (10 points m	aximum)	Dredging Bank shaping One side channel modifications Riparian Score: 5
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down	Recent or no recovery (aximum) k only one per bank, OR	Dredging Bank shaping One side channel modifications Riparian Score: 5
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down	Recent or no recovery (k Erosion (10 points m stream (For each category, check	aximum) k only one per bank, OR past 100 ft Riparian)	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AYERAGE).
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down tiparian width R (per bank)	k Erosion (10 points m	aximum) k only one per bank, OR past 100 ft Riparian)	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AVERAGE). Bank Erosion L R (per bank)
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down tiparian width R (per bank) Wide >50m (4)	Recent or no recovery (k Erosion (10 points m nstream (For each category, check roslon/Runoff-Floodplain quality (R (most predominant per bank)	axirnum) k only one per bank, OR past 100 ft Riparian) L R	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AYERAGE). Bank Erosion L. R. (per bank) Tillage (1)
Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking dowr tiparian width R (per bank) UWide >50m (4)	k Erosion (10 points mestream (For each category, check rosion/Runoff-Floodplain quality (in R (most predominant per bank) Forest, Swamp (3)	aximum) k only one per bank, OR past 100 ft Riparian) L R Conservation Urban or Indu Mining, Const	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AVERAGE). Bank Erosion L R (per bank) Tillage (1) None or little (3) strial (0) Moderate (2) ruction (0) Heavy/Severe (1)
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Mone (1) Poor (1) mments: Riparian Zone & Ban Left/Right banks looking down tiparian width R (per bank) Wide >50m (4) Moderate 10-50m (3) Narrow 5-10m (2) Very narrow <5m (1) None (0) Comments 1-Pool/Glide Quality (1) Max pool depth (check one) 1-1 (0.7-1m (4) (0.4-0.7m (2) (0.2-0.4m (1) (1) (1) (2) (3) (4) (5) (6) (6) (7) (7) (7) (8) (8) (6) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	k Erosion (10 points mestream (For each category, check roslon/Runoff-Floodplain quality (Residential, Park, New field (1) Residential, Park, New field (1) Fenced pasture (1) Residential, Park, New field (1) Pool width > riffle width (2) Pool width > riffle width (1) Pool width < riffle width (0) ments: (1) (check only one per category, Riffle/run substrate	aximum) k only one per bank, OR past 100 ft Riparian) L R Gonservation Urban or Indu Mining, Const Mopen Pasture Pool/Run/Riffle co Eddies (1) Fast (1) Moderate (1) Slow (1) OR two and AVERAGE	Dredging Bank shaping One side channel modifications Riparian Score: 5 two per bank and AYERAGE). Bank Erosion L. R. (per bank) Tillage (1) None or little (3) strial (0) Moderate (2) ruction (0) Moderate (2) ruction (0) Moderate (1) Rowcrop (0) Pool/Glide Score: Surrent velocity (check all that apply) Torrential (-1) Intermittent (-2) No pool (0) Riffle/Run Score: Serum embeddedness
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mple # bioSam		Name	Location		1
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Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: **Griffy Creek** Section: Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 **OHWM Width:** 52.0 feet Channelized: **OHWM Depth:** 13.0 feet Yes **USCOE** Jurisdiction: **Stream Type:** Perennial Yes

Stream Type:PerennialUSCOE Jurisdiction:YesEvaluation Type:QHEIIDEM Jurisdiction:YesEvaluation Score:37Watershed Area:14.10 sq mi

Legal Drain (Y/N): N Predominant Sub: Silt

UTME: 1769250 ft **UTMN**: 14246108 ft

	Stream S5-S065d -	· Modified Warm Water Habi	tat
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	220	0.26	0.77
5	175	0.21	0.72
6	125	0.15	0.59
7	251	0.30	0.76
8	131	0.16	0.61
RPA 8	102	0.12	0.57

Description of Potential Impact:

Impacts to S5-S065d at this location for the Alternatives are listed in the table above. Segments S5-S065b, S5-S065c, and S5-S065d were evaluated together. Segment S5-S065b is upstream of the existing SR 37 bridge, S5-S065c is the portion of stream being bridged, and S5-S065d is downstream of the bridge. These segments have experienced previous disturbance and exhibit no recovery at the time of the evaluation. This stream is a perennial stream with poor habitat development and low to no sinuosity where these Alternatives cross this stream. The predominant substrate consists of silt. The stream has a moderately wide riparian corridor associated with both banks. The adjacent floodplain is dominated by an old field. Photographs taken upstream and downstream for this location at S5-S065b are on the second page of this form. Implementation of the RPA 8 will decrease the amount of impacts to Griffy Creek at this location.



Photograph Taken Upstream



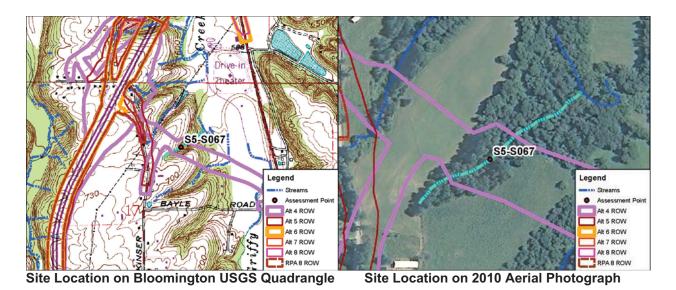
Photograph Taken Downstream

Secs-565 b, c, d

	Stream Name	Location	
The a to be a to be		EEK / SR.	
veyor Sample Date Count	macro Sample	leType Mabitat Complete	QHEI Score: 37
Substrate (20 points		1-1-1-1	Substrate Score:
		Cubatrata Quality Jahan	The state of the s
Check 1 Predominant Pool		Substrate Quality (chec	ck only 1, or check 2 and AVERAGE)
Check all that are present	P=Pool, R=Riffle	[7] Limenton (d)	Substrate Origin
P R P R	P R P R	Limestone(1)	Hardpan(0) Lacustrine(0) Sandstone(0) ⊢Shale(-1)
PR PR PR	P R P R P R P R P R	120000000000000000000000000000000000000	Rip/Rap(0) Coal fines(-2)
Boulders(9)	Detritus(3)	Silt Cover	Embeddedness
Cobble(8)	Muck(2)	Usilt heavy(-2)	LExtensive(-2)
Gravel(7)		Silt moderate	The state of the s
Sand(6)		Silt normal(0)	Low/Normal(0)
Bedrock(5)	☐ ☐ Artificial(0) ☐ ☐	Silt free(1)	None(1)
TE: ignore sludge originating		present(2)	
rces; score based on natural	substrates Comments: 4	+2 = 6 (-5)	
nstream Cover (20 p			Instream Cover Score: 8
		Arriba	unt (check only 1, or 2 and AVERAGE)
/pe (check ALL that apply) Undercut banks(1)	Deep pools(2) Oxbows		Extensive >75% (11)
Overhanging vegetation(1)		macrophytes(1)	Moderate 25-75% (7)
Shallows(in slow water)(1)		d woody debris(1)	Sparse 5-25% (3)
Rootmats(1) Comme		,	Nearly absent <5% (1)
Channel Morphology		nony OR has and AVEDA	GE) Channel Casses [=]
	S. Harris Harris Harris Harris Harris		
nuosity Development		Annual An	odifications/Other
High (4) Excellent	10 P		Snagging Impound
Moderate (3) Good (5)	Recovered (4)		Relocation Islands Canopy Removal Leveed
Low (2) ☐ Fair (3) None (1) ☐ Poor (1)	Recovering (3) Recent or no recovery	THE RESIDENCE OF STREET	
none (1)	A Werell of the terniera		
nments:			Dredging Bank shaping One side channel modifications
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Aquatic Resource: Stream
Stream Name: Stream
Unnamed Trib. Griffy Creek

Stream Name: Unna Quarter: NE Range: R1W

Legal Drain (Y/N):

Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 52

UTME: 1769375 ft **UTMN**: 14242649 ft

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USGS Quadrangle: Bloomington

Section: 17 Township: T9N IDEM 303(d) List: N/A OHWM Width: 5.0 feet **OHWM Depth:** 0.5 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area: 0.02 sq mi Boulder/cobble **Predominant Sub:**

Stream S5-S067 – Class II PHWH					
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)		
4	415	0.05	1.81		
5	0	0.00	0.00		
6	0	0.00	0.00		
7	0	0.00	0.00		
8	0	0.00	0.00		
RPA 8	0	0.00	0.00		

Description of Potential Impact:

Impacts to S5-S067 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of boulder, cobble, and sand. There is a wide riparian corridor where Alternative 4 crosses this stream. The adjacent floodplain consists of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S067 are on the second page of this form.



Photograph Taken Upstream



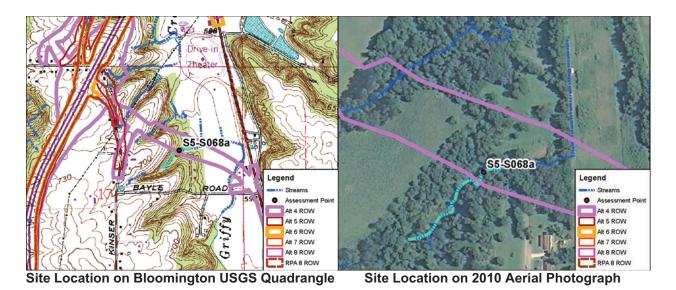
Photograph Taken Downstream



	THIEF GOOTE (Sum of metrics 1, 2, 3) .	
SITE NAME/LOCATION I-69 Section 5	05 0007	
OTTE NOMBER	S5-S067 RIVER BASIN White River DRAINAGE AREA (mi²) 0.	02
LENGTH OF STREAM REACH (ft) 200	LAT. 39.21891 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KS	SS COMMENTS (Long: -86.54466) (Natural-Class II)	
NOTE: Complete All Items On This For	m - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NA MODIFICATIONS:	ATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECO	OVERY
SUBSTRATE (Estimate percent of every state of	very type of substrate present. Check ONLY two predominant substrate TYPE boxes	
,	icant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE Metri
TYPE BLDR SLABS [16 pts]	PERCENT TYPE PERCENT 0% SILT [3 pt] 0%	Point
BOULDER (>256 mm) [16 pts]	40% LEAF PACK/WOODY DEBRIS [3 pts] 0%	
BEDROCK [16 pt]	0% FINE DETRITUS [3 pts]	Substra Max = 4
COBBLE (65-256 mm) [12 pts]	30% CLAY or HARDPAN [0 pt]	IVIAX = 4
GRAVEL (2-64 mm) [9 pts]	5% MUCK [0 pts] 0%	32
SAND (<2 mm) [6 pts]	25% ARTIFICIAL [3 pts] 0%	<u> </u>
Total of Percentages of	70.00% (A) Substrate Percentage Check 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock _ SCORE OF TWO MOST PREDOMINATE SUBS		
2. Maximum Pool Depth (Measure the n	maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from roa	ad culverts or storm water pipes) (Check ONLY one box):	Max = 3
> 30 centimeters [20 pts]	> 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	< 5 cm [5 pts] NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS	MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the	e average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	└ ≤ 1.0 m (<=3' 3") [5 pts]	Max=30
COMMENTS OHW = 5'/0.5'	AVERAGE BANKFULL WIDTH (meters): 1.52	20
RIPARIAN ZONE AND FLOOD	This information must also be completed PLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH	FLOODPLAIN QUALITY	
L R (Per Bank)	L R (Most Predominant per Bank) L R	
✓ ✓ Wide >10m	Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m	Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m	Residential, Park, New Field Open Pasture, Row Cro	р
None	Fenced Pasture Mining or Construction	
COMMENTS	I cheed resture	
FLOW REGIME (At Time of Ev	valuation) (Check ONLY one box):	
Stream Flowing `	Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated po	ools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS_		
	per 61 m (200 ft) of channel) (Check ONLY one box):	
None 0.5	1.0 2.0 3.0 3.0 1.5 2.5 3	
] 1.0 [] 2.0 [] 70	
STREAM GRADIENT ESTIMATE		
Flat (0.5 ft/100 ft)		
i lat (0.3 la 100 la)	■ Moderate (2 ft/100 ft) ■ Moderate to Severe ▼ Severe (10 ft/10	0 ft)

ADDITIONAL STREA	S5-S06" M INFORMATION (This Information Must Also be Completed):
QHEI PERI	ORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
WWH Name: Gri	Distance from Evaluated Stream _
EWH Name:	Distance from Evaluated Stream
MAPPING:	ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Na	me: Bloomington NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Monroe	Township / City: Bloomington
MISCELLA Base Flow Conditions	
Photograph Information	n:
Elevated Turbidity? (//N): N Canopy (% open): 10%
Were samples collect	ed for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
	emp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach	representative of the stream (Y/N) If not, please explain:
Additional comments	description of pollution impacts:
BIOTIC EV Performed? (Y/N): Fish Observed? (Y/N) Frogs or Tadpoles Observed? (Comments Regarding)	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouch
	NG AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): ant landmarks and other features of interest for site evaluation and a narrative description of the stream's location
	See Stream Assessment Form
FLOW -	S5-S067 for site topographic map, serial photograph, and resource photographs





Stream Name:Unnamed Trib. Griffy CreekSection:17Quarter:NETownship:T9NRange:R1WIDEM 303(d) List:N/A

05120202010 OHWM Width: Watershed: 2.5 feet Channelized/Type: No/Natural **OHWM Depth** 0.8 feet Stream Type: Ephemeral **USCOE Jurisdiction:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 44 Watershed Area: 0.09 sq mi

Legal Drain (Y/N): N **Predominant Sub:** Bedrock/cobble **UTME:** 1769912 ft **UTMN:** 14242245 ft

Stream S5-S068a –Class II PHWH					
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)		
4	309	0.02	1.35		
5	0	0.00	0.00		
6	0	0.00	0.00		
7	0	0.00	0.00		
8	0	0.00	0.00		
RPA 8	0	0.00	0.00		

Description of Potential Impact:

Impacts to S5-S068a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately bedrock, cobble, and leaf pack. There is a wide riparian buffer associated with this stream. The floodplain consists of mature forests on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S068a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



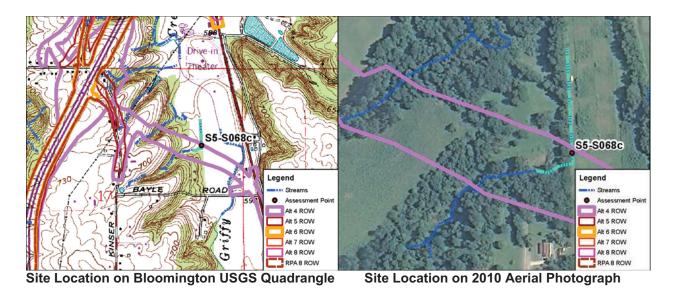
44

SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S068a DRAINAGE AREA (mi²) 0.09 SITE NUMBER 200 LAT. **39.21779** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE DATE 05/12/06 COMMENTS (Long: -86.54277) (Natural-Class II) A Rogers SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 0% 5% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 19% 0% Substrate 40% 0% BEDROCK [16 pt] FINE DETRITUS [3 pts] Max = 4010% 21% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 5% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 34 0% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 61.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 28 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: | 6 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.5' / 0.8' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 2.5 >3 STREAM GRADIENT ESTIMATE ✓ Moderate to Severe Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM	INFORMATION (This Information Must Also be Completed):
	RMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREA	AM DESIGNATED USE(S)
WWH Name: Griffy	· ·
CWH Name: _	_ Distance from Evaluated Stream _
EWH Name:	Distance from Evaluated Stream _
	TTACH COPIES OF MAPS, INCLUDING THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Nam	e: Bloomington NRCS Soil Map Page: 23 NRCS Soil Map Stream Order
County: Monroe	Township / City: Bloomington
MISCELLANE	:ous
Base Flow Conditions? ((Y/N): N _ Date of last precipitation: 05/12/06 _ Quantity: 0.39
Photograph Information:	
Elevated Turbidity? (Y/N	I): N Canopy (% open): 30%
Were samples collected	for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Tem	pp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach re	presentative of the stream (Y/N) If not, please explain:
Additional comments/de	scription of pollution impacts:
BIOTIC EVAL	<u>-UATION</u>
Performed? (Y/N): _	(If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the s ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Frogs or Tadpoles Obse	Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
Comments Regarding B	iology:
<u> </u>	
DRAWIN	G AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important	t landmarks and other features of interest for site evaluation and a narrative description of the stream's location
•	
	See Stream Assessment Form
FLOW	S5-S068a for site topographic map,

aerial photograph, and resource photographs





T9N

Aquatic Resource: Stream USGS Quadrangle: Bloomington Stream Name: Unnamed Trib. Griffy Creek Section: 17

Stream Name: Unnamed Trib. Griffy Creek Section:
Quarter: NE Township:
Range: R1W IDEM 303(d)

Range: R1W IDEM 303(d) List: N/A OHWM Width: 5.7 feet Watershed: 05120202010 Channelized/Type: No/Natural **OHWM Depth:** 0.4 feet Stream Type: Ephemeral **USCOE** Jurisdiction: Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 45 Watershed Area: 0.09 sq mi **Predominant Sub:** Gravel/cobble Legal Drain (Y/N): Ν

UTME: 1770374 ft **UTMN**: 14242384 ft

Stream S5-S068c –Class II PHWH					
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)		
4	286	0.04	0.49		
5	0	0.00	0.00		
6	0	0.00	0.00		
7	0	0.00	0.00		
8	0	0.00	0.00		
RPA 8	0	0.00	0.00		

Description of Potential Impact:

Impacts to S5-S068c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately gravel, cobble, and sand. The stream has a wide riparian corridor on the right bank and narrow riparian corridor on the right bank. The adjacent floodplain is dominated with mature forest on the right and an old field on the left where Alternative 4 crosses this stream. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S068c are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



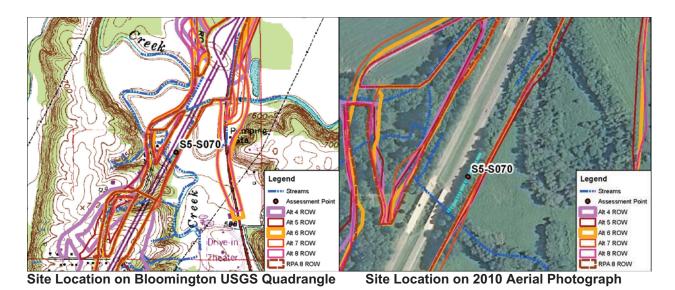
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S068c RIVER BASIN White River DRAINAGE AREA (mi²)	0.09
LENGTH OF STREAM REACH (ft) 200 LAT. 39.21817 LONG. RIVER CODE RIVER MILE	
DATE 04/26/12 SCORER KSS/DEW COMMENTS (Long: -86.54114) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 30% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 40% MUCK [0 pts] 0%	25
SAND (<2 mm) [6 pts]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B) Check (Check Substrate Percentage Check (Check Substrate Percentage Check Substrate	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width Max=30
	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.75 This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.75	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Most Predominant per Bank) L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.75 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.75 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m None None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermittent)	Width Max=30 20
> 4.0 meters (> 13') [30 pts]	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS 1.75 AVERAGE BANKFULL WIDTH (meters): 1.75	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ N	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Mide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5.7'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑ WNOTE: River Left (L) and Right (R) as looking downstream ☆ RIPA	Width Max=30 20

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	S5-S0680
QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Griffy Creek Distance from Evaluated Stream	_
CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SIT	
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: NRCS Soil Map Stre	eam Order
County: Monroe Township / City: Bloomington	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/24/12 Quantity: 0.15	
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 75%	
Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of collection insurants.	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be	
ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessmen	t Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) Vouc	er? (Y/N) N
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be com	pleted):
Include important landmarks and other features of interest for site evaluation and a narrative description of the s	tream's location
See Stream Assessment Form	



S5-S068c for site topographic map, aerial photograph, and resource photographs





Stream Name:Unnamed Trib. Griffy CreekSection:8Quarter:SETownship:T9NRange:R1WIDEM 303(d) List:N/A

N/A 05120202010 OHWM Width: Watershed: 2.0 feet Channelized/Type: Yes/Roadside Ditch **OHWM Depth:** 0.5 feet Stream Type: **USCOE Jurisdiction:** Ephemeral No **Evaluation Type:** HHEI **IDEM Jurisdiction:** No

Evaluation Score: 36 **Watershed Area:** 0.01 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Clay

UTME: 1769427 ft **UTMN**: 14246218 ft

Stream S5-S070 – Modified Class II PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	351	0.02	0.40	
5	351	0.02	0.40	
6	351	0.02	0.39	
7	351	0.02	0.40	
8	351	0.02	0.39	
RPA 8	351	0.02	0.39	

Description of Potential Impact:

Impacts to S5-S070 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located at the edge of existing INDOT ROW. Its substrate is predominately clay. This ditch flows directly into Griffy Creek. There is a narrow riparian buffer associated with this artificial channel. The floodplain consists of INDOT ROW on the right bank and agricultural land on the left. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S070 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



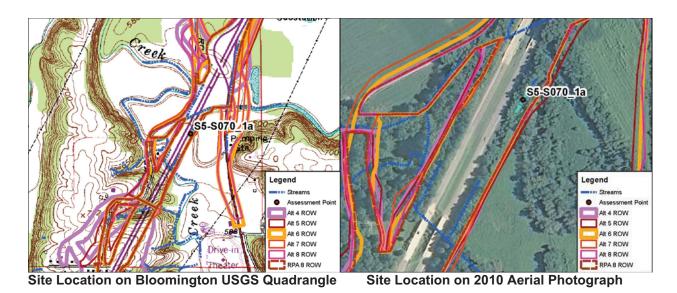
36

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S070 RIVER BASIN White River DRAINAGE AREA (mi²) 0	.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22871 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54441) (Roadside Ditch-Modified Class	ss II)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] BEDROCK [16 pt] O% FINE DETRITUS [3 pts]	Substrat
COBBLE (65-256 mm) [12 pts]	Max = 4
☐ GRAVEL (2-64 mm) [9 pts] 0% MUCK [0 pts] 0% ☐ SAND (<2 mm) [6 pts]	6
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock O.00% (A) Substrate Percentage Check O.00% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max - 3
> 22.5 - 30 cm [30 pts]	25
ditab is a language	
COMMENTS ditch is a long pool MAXIMUM POOL DEPTH (centimeters): 15	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
> 4.0 meters (> 13) [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m (<=3' 3") [5 pts]	Max=30
COMMENTS OHW - 2.0' / 0.5' AVERAGE BANKFULL WIDTH (meters): 0.65	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m	
Field Field Urban or industrial	
✓ ✓ Narrow <5m Residential, Park, New Field ✓ Open Pasture, Row Cro	op
None Fenced Pasture Mining or Construction COMMENTS	_
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 1.0 2.0 3.0 >3 1.5 2.5	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10	00 ft)

ADDITIONAL STRE	EAM INFORMATION (This Information Mu	ıst Also be Completed):		S5-S070
	RFORMED? - Yes V No QHEI Scor		ach Completed QHEI Form)	
	TREAM DESIGNATED USE(S)	,	,	
WWH Name:	• •		Distance from Evaluated Stream	
CWH Name:			Distance from Evaluated Stream	
EWH Name:			Distance from Evaluated Stream _	
MAPPING	G: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHEI	D AREA. CLEARLY MARK THE SITE LOC	CATION
	Name: Bloomington	NRCS Soil Map F	Page: 18 NRCS Soil Map Stream C	Order
County: Monroe		Township / City: Bloom	nington	
	ANEOUS			
Base Flow Conditio	ns? (Y/N):_N Date of last precipitation	on:_ 05/12/06	Quantity: 0.39	
Photograph Informa	ation: 132 Upstream / 133 Downstream /	134 Right Bank / 135 Left	Bank	
Elevated Turbidity?	(Y/N): _ N	70%		
Were samples colle	ected for water chemistry? (Y/N):(Note lab sample no. or id.	and attach results) Lab Number:	
Field Measures:	Temp (°C) Dissolved Oxygen (mg	,, , , , ,	Conductivity (µmhos/cm)	
Is the sampling read	ch representative of the stream (Y/N)	If not, please explain:		
Additional commen	ts/description of pollution impacts:			
Performed? (Y/N): Fish Observed? (Y/Frogs or Tadpoles Comments Regardi	ID number. Include appropriate f (N) Voucher? (Y/N) Salamai Observed? (Y/N) Voucher? (Y/N)	•	II. NOTE: all voucher samples must be labelimary Headwater Habitat Assessment Many Voucher? (Y/N) Voucher? (Y/N)	ual)
	WING AND NARRATIVE DESCRIF		·	•
Include impo	ortant landmarks and other features of inte	erest for site evaluation ar	nd a narrative description of the stream	's location
_	See Stream Assessment	Form		
FLOW -	S5-S070 for site topo	graphic map,		
	aerial photograph, an	d resource ph	otographs	

Save as pdf

Reset Form



Aquatic Resource: Stream **USGS** Quadrangle:

Stream Name: Unnamed Trib. Griffy Creek

Quarter: ΝE Range: R1W

Watershed: 05120202010 Channelized/Type: Yes/Concrete Gutter **Stream Type:** Ephemeral

Evaluation Type: HHEI **Evaluation Score:** 17

Legal Drain (Y/N): Ν **UTME**: 1769722 ft **UTMN:** 14246762 ft Bloomington

Section: Township: T9N IDEM 303(d) List: N/A OHWM Width: 2.0 feet **OHWM Depth:** 0.4 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area:

0.01 sq mi Artificial **Predominant Sub:**

Stream S5-S070_1a – Modified Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	155	0.01	0.39	
5	155	0.01	0.47	
6	155	0.01	0.40	
7	155	0.01	0.40	
8	155	0.01	0.40	
RPA 8	155	0.01	0.40	

Description of Potential Impact:

Impacts to S5-S070 1a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter. There is a wide riparian corridor consisting of immature forest on the right bank and a narrow riparian corridor consisting of maintained INDOT ROW on the left bank. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S070 1a are on the second page of this form.



Photograph Taken Upstream



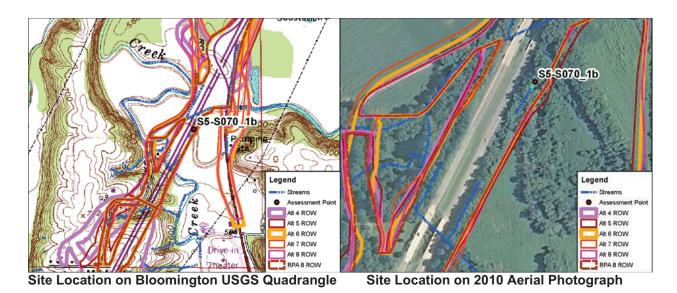


SITE NAME/LOCATION I-69 Section 5 SITE NUMBER S5-S070_1a RIVER BASIN White River DRAINAGE AREA (mi²) 0.01 LENGTH OF STREAM REACH (ft) 150 LAT. 39.23020 LONG. RIVER CODE RIVER MILE
LENGTH OF STREAM REACH (ft) 150 LAT. 39.23020 LONG. RIVER CODE RIVER MILE
DATE 04/25/12 SCORER KSS/DEW COMMENTS (Long: -86.54337) (Concrete Gutter-Modified Class I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS:
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.
TYPE PERCENT TYPE PERCENT Met
BLDR SLABS [16 pts]
BEDROCK [16 pt] 0% Substi
COBBLE (65-256 mm) [12 pts]
☐ GRAVEL (2-64 mm) [9 pts]
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) A + E
Bldr Slabs, Boulder, Cobble, Bedrock Cobble, Bedrock Score of two most predominate substrate types: 6
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 5 cm - 30 cm [30 pts] < 5 cm [5 pts]
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]
COMMENTS MAXIMUM POOL DEPTH (centimeters): 1
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Bank
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Widt
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 2.0'/0.4' AVERAGE BANKFULL WIDTH (meters): 0.60
COMMENTS OHW 2.0'/0.4' AVERAGE BANKFULL WIDTH (meters): 0.60 This information must also be completed
COMMENTS OHW 2.0'/0.4' AVERAGE BANKFULL WIDTH (meters): 0.60
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) AVERAGE BANKFULL WIDTH (meters): 0.60 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY LR (Per Bank) LR (Most Predominant per Bank) LR (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m AVERAGE BANKFULL WIDTH (meters): 0.60 L R (Nost Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field AVERAGE BANKFULL WIDTH (meters): 0.60 L R (Most Predominant per Bank) L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m AVERAGE BANKFULL WIDTH (meters): 0.60 L R (Nost Predominant per Bank) L R (Most Predominant per Bank) Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Narrow <5m None Fenced Pasture AVERAGE BANKFULL WIDTH (meters): 0.60 L R (Most Predominant per Bank) L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction COMMENTS
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing AVERAGE BANKFULL WIDTH (meters): 0.60 L R NOTE: River Left (L) and Right (R) as looking downstream Average Completed RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average Completed RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average Completed RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream Average Completed Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermittent)
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY **NOTE: River Left (L) and Right (R) as looking downstream ** RIPARIAN WIDTH RIPARIAN WIDTH FLOODPLAIN QUALITY
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY **NOTE: River Left (L) and Right (R) as looking downstream ** RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Wetland Urban or Industrial Moderate 5-10m Residential, Park, New Field Open Pasture, Row Crop None Residential, Park, New Field Mining or Construction Flow Regime (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) OHW 2.0'/0.4' AVERAGE BANKFULL WIDTH (meters): 0.60 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE:
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 COMMENTS AVERAGE BANKFULL WIDTH (meters): 0.60 L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 3.0



See Stream Assessment Form S5-S070_1a for site topographic map, aerial photograph, and resource photographs





T9N

Stream Name: Unnamed Trib. Griffy Creek Section:

Quarter: NE Township:
Range: R1W IDEM 303(d) I

IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 1.8 feet Channelized/Type: No/Natural **OHWM Depth:** 0.3 feet **USCOE Jurisdiction: Stream Type:** Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 14 **Watershed Area:** 0.01 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Silt/leaf pack

UTME: 1769783 ft **UTMN**: 14246862 ft

Stream S5-S070_1b – Modified Class I PHWH				
Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acre				
4	52	0.01	0.23	
5	52	0.01	0.31	
6	52	0.01	0.24	
7	52	0.01	0.24	
8	52	0.01	0.24	
RPA 8	52	0.01	0.24	

Description of Potential Impact:

Impacts to S5-S070_1b for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate consists of silt and leaf pack. There is a wide riparian corridor consisting of immature forest and wetland on the right bank and a narrow riparian corridor consisting of maintained INDOT ROW on the left bank. This ditch provides some hydrology to Wetland W62. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S070_1b are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



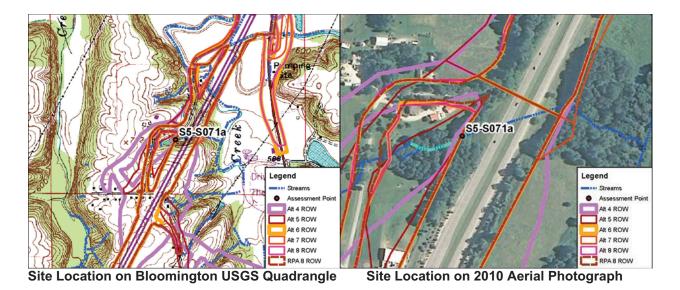
ChieFPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S070_1b RIVER BASIN White River DRAINAGE AREA (mi²)	.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.23047 LONG. RIVER CODE RIVER MILE	
DATE 04/24/12 SCORER KSS COMMENTS (Long: -86.54315) (Natural-Modified Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt]	Substrate Max = 40
COBBLE (65-256 mm) [12 pts]	Wax = 40
☐ GRAVEL (2-64 mm) [9 pts]	9
Total of Percentages of 0.00% (A) Substrate Percentage Check 100% (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW = 1.8'/0.3' AVERAGE BANKFULL WIDTH (meters): 0.55	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	
☐ ✓ Wide >10m ☐ ✓ Mature Forest, Wetland ☐ Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	ıþ
Narrow <5m Residential, Park, New Field Open Pasture, Row Crown None Fenced Pasture Mining or Construction	pp
Narrow <5m Residential, Park, New Field Open Pasture, Row Crown None Fenced Pasture Mining or Construction COMMENTS	op
Narrow <5m Residential, Park, New Field Open Pasture, Row Crown None Fenced Pasture Mining or Construction	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crown None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Residential, Park, New Field Mining or Construction Mining or Construction Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None None Open Pasture, Row Crow Mining or Construction Mining or Construction Mining or Construction Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 3.0	
None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 0.5 None 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	
None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None None Open Pasture, Row Crow Mining or Construction Mining or Construction Mining or Construction Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 3.0	

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Stream Name: Unnamed Trib. Griffy Creek Section: 8

Quarter: SW Township: T9N Range: R1W IDEM 303(d) List: N/A

Watershed: 05120202010 OHWM Width: 8.2 feet Channelized/Type: No/Natural **OHWM Depth:** 0.9 feet **USCOE Jurisdiction: Stream Type:** Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 50 **Watershed Area:** 0.06 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Cobble/gravel

UTME: 1768509 ft **UTMN**: 14245118 ft

Stream S5-S071a – Class II PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	82	0.02	0.34	
5	32	0.01	0.26	
6	31	0.01	0.24	
7	31	0.01	0.24	
8	31	0.01	0.24	
RPA 8	31	0.01	0.24	

Description of Potential Impact:

Impacts to S5-S071a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of cobble, gravel, and bedrock. There is a moderately wide riparian buffer along the left bank consisting of immature forest. Immature forest is the dominant habitat on the right bank floodplain, as well, where these Alternatives cross this stream. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S071a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

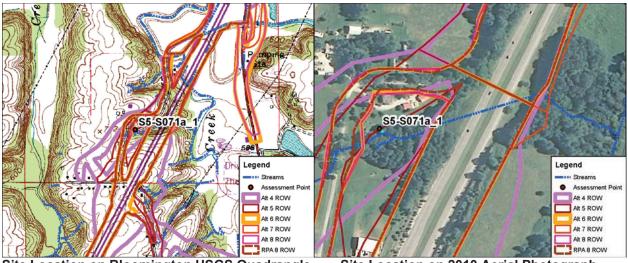


SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S071a RIVER BASIN White River DRAINAGE AREA (mi²) 0.0	16
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22570 LONG. RIVER CODE RIVER MILE	
DATE 04/24/12 SCORER KSS COMMENTS (Long: -86.54768) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instruc	ctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERED RECENT OR NO RECOVERED RECOVERED RECOVERED RECENT OR NO RECOVERED RECOVERE	VERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	UUEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
□ BLDR SLABS [16 pts] □ SILT [3 pt] 0%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] DW LEAF PACK/WOODY DEBRIS [3 pts] 0% FINE DETRITUS [3 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 40% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]	25
SAND (<2 mm) [6 pts]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
	Pool Depti
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	-
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 5	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW = 8.2'/0.9' AVERAGE BANKFULL WIDTH (meters): 2.50	20
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
✓ Wide >10m ✓ Mature Forest, Wetland ✓ Conservation Tillage ✓ Moderate 5-10m ✓ Immature Forest, Shrub or Old Urban or Industrial	
Field Field	
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop	
None Fenced Pasture Mining or Construction COMMENTS	
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	
COMMENTS	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 2.0 3.0 3.0 0.5 1.5 2.5 3	
STREAM GRADIENT ESTIMATE	
Flat (0.5 ft/100 ft) Flat to Moderate Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)	ft)

ADDITIONAL STREAM	I INFORMATION (This Information Mu	ust Also be Completed):		S5-S0/1a
QHEI PERF	ORMED? - Yes No QHEI Sco	re (If Yes, Atta	ach Completed QHEI Form)	
DOWNSTRE WWH Name: Griff CWH Name: EWH Name:	EAM DESIGNATED USE(S) Ty Creek		Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream	0.20
MAPPING: A	ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHE	D AREA. CLEARLY MARK THE SITE L	OCATION
USGS Quadrangle Nai	me: Bloomington	NRCS Soil Map I	Page: NRCS Soil Map Stream	o Order
County: Monroe		Township / City: Bloom	nington	
Field Measures: Te	P (Y/N): Y Date of last precipitation: N): N Canopy (% open):	A5% Note lab sample no. or id. A/I) pH (S.U.) If not, please explain:		
BIOTIC EV/NPerformed? (Y/N): NPerformed? (Y/N): Fish Observed? (Y/N) Frogs or Tadpoles Observed: Comments Regarding	(If Yes, Record all observations. ID number. Include appropriate to the served? (Y/N) N Salama Served? (Y/N) N Voucher? (Y/N) N	·	II. NOTE: all voucher samples must be la imary Headwater Habitat Assessment Ma Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (anual)
		OTION OF STREAM I	DEACH (This must be somele	tod)
	NG AND NARRATIVE DESCRIF ntlandmarks and other features of into See Stream Assessme S5-S071a for site t	erest for site evaluation and and and and and and and and and an	nd a narrative description of the strea	•
	aerial photograph,		_	

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Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek SW Range: R1W

Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 24

Evaluation Score: 24
Legal Drain (Y/N): N

UTME: 1768218 ft **UTMN**: 14245100 ft

USGS	Quadrangle:	Bloomington
	adda di gioi	Diooninigion

Section: 8
Township: T9N
IDEM 303(d) List: N/A
OHWM Width: 3.0 feet
OHWM Depth: 0.5 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.06 sq mi

Watershed Area: 0.06 sq mi
Predominant Sub: Cobble/artificial

Stream S5-S071a_1 – Modified Class I PHWH					
Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acre					
4	0	0.00	0.00		
5	18	0.01	0.00		
6	0	0.00	0.00		
7	0	0.00	0.00		
8	0	0.00	0.00		
RPA 8	0	0.00	0.00		

Description of Potential Impact:

Impacts to S5-S071a_1 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of cobble and large riprap. There is a moderately wide riparian corridor along the left bank where Alternative 5 crosses this stream. The floodplain of the left bank consists of a residential yard. The right bank consists of a narrow immature forested floodplain. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S071a_1 are on the second page of this form.



Photograph Taken Upstream



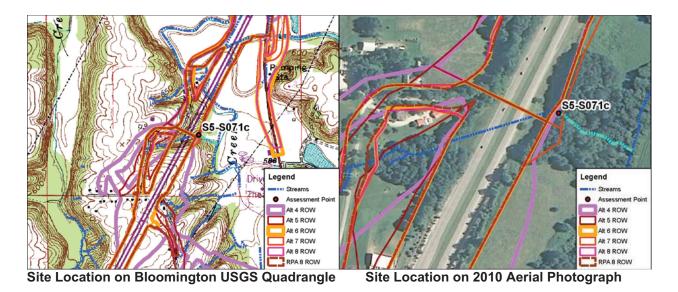
Photograph Taken Downstream



SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S071a_1 RIVER BASIN White River DRAINAGE AREA (mi²)	0.06
LENGTH OF STREAM REACH (ft) 45 LAT. 39.22565 LONG. RIVER CODE RIVER MILE	
DATE 04/24/12 SCORER KSS COMMENTS (Long: -86.54871) (Modified Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI
□ □ BLDR SLABS [16 pts] □ □ SILT [3 pt] 0%	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts] 40% CLAY or HARDPAN [0 pt] 0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	19
Ortho (-2 mm) [o pto]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A+B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankful Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' AVERAGE BANKFULL WIDTH (meters):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Rig	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m NOTE: River Left (L) and Right (R) as looking downstream And Floodplain Quality Mature Forest, Wetland Onen Pasture Pow Completed Urban or Industrial Field	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m NOTE: River Left (L) and Right (R) as looking downstream And Floodplain Quality Mature Forest, Wetland Onen Pasture Pow Completed Urban or Industrial Field	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Note Ploophlain QUALITY RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitten)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Moderate 5-10m Mature Forest, Wetland None Residential, Park, New Field Penced Pasture Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS 1	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ❖ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) a	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Mide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH Flood Pasture Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.5' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ❖ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) a	Width Max=30 5

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Stream Name: Unnamed Trib. Griffy Creek Section: 8

 Quarter:
 SW
 Township:
 T9N

 Range:
 R1W
 IDEM 303(d) List:
 N/A

 Watershed:
 05120202010
 OHWM Width:
 3.0 feet

Channelized/Type: No/Natural OHWM Depth: 0.6 feet Stream Type: Ephemeral USCOE Jurisdiction: Yes Evaluation Type: HHEI IDEM Jurisdiction: Yes

Evaluation Score:17Watershed Area:0.05 sq miLegal Drain (Y/N):NPredominant Sub:Sand/silt

UTME: 1769077 ft **UTMN**: 14245264 ft

Stream S5-071c – Modified Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	18	0.01	0.03	
5	4	0.01	0.02	
6	4	0.01	0.02	
7	60	0.01	0.23	
8	4	0.01	0.02	
RPA 8	4	0.01	0.02	

Description of Potential Impact:

Impacts to S5-071c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate consists of sand and silt. There is a wide riparian corridor where the Alternatives cross this stream. The adjacent floodplain consists of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-071c are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S071c DRAINAGE AREA (mi²) 0.05 SITE NUMBER 200 LAT. **39.22609** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.54567) (Natural-Class I) DATE 10/12/11 DEW/KSS SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 44% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% Substrate 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 10% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 12 46% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock TOTAL NUMBER OF SUBSTRATE TYPES: 3 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 0 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.6' AVERAGE BANKFULL WIDTH (meters): 0.91 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **FLOODPLAIN QUALITY** RIPARIAN WIDTH (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 >3 STREAM GRADIENT ESTIMATE

Severe (10 ft/100 ft)

Moderate (2 ft/100 ft)

Flat (0.5 ft/100 ft)

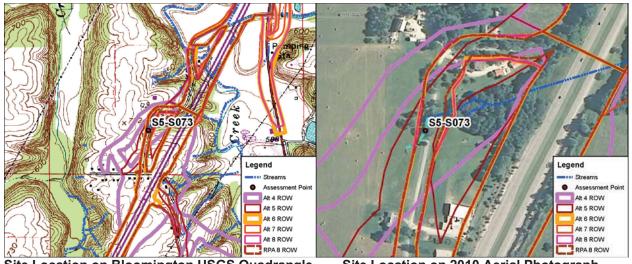
Flat to Moderate

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Griffy Creek Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Monroe Township / City: Bloomington
MISCELLANEOUS Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 5% Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm) Is the sampling reach representative of the stream (Y/N) If not, please explain: Additional comments/description of pollution impacts:
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the sit ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) Voucher? (Y/N) N Voucher? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
▲ See Stream Assessment Form



S5-S071c for site topographic map, aerial photograph, and resource photographs





Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek SW Range: R1W

Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 28

Legal Drain (Y/N): N

UTME: 1767979 ft **UTMN**: 14244916 ft

USGS	Quadrangle:	Bloomington
000	adda di gioi	Diooninigion

Section: 8
Township: T9N
IDEM 303(d) List: N/A
OHWM Width: 2.2 feet
OHWM Depth: 0.9 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.01 sq mi

Watershed Area: 0.01 sq mi Predominant Sub: Gravel/sand

Stream S5-S073 – Class I PHWH					
Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acre					
4	0	0.00	0.00		
5	212	0.01	0.00		
6	163	0.01	0.00		
7	166	0.01	0.00		
8	163	0.01	0.00		
RPA 8	147	0.01	0.00		

Description of Potential Impact:

Impacts to S5-S073 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of gravel and sand. There is a no riparian corridor associated with this stream. The adjacent floodplain consists of open pasture. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S073 are on the second page of this form.



Photograph Taken Upstream



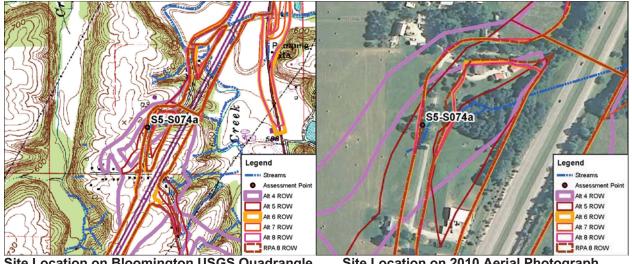


SITE NAME/LOCATION I-69 Section 5		<u></u>			
	- S073 RIVER B	ASIN White River	DRAINAC	GE AREA (mi²)	.01
			R CODE	RIVER MILE	
DATE 05/12/06 SCORER A Rogers	COMMENTS	Long: -86.54955) (N	atural-Class I)		
NOTE: Complete All Items On This Form	- Refer to "Field Ev	aluation Manual for O	hio's PHWH Str	eams" for Instr	uctions
STREAM CHANNEL NONE / NATU MODIFICATIONS:	IRAL CHANNEL 🕡 F	RECOVERED RECO	VERING REC	ENT OR NO REC	OVERY
SUBSTRATE (Estimate percent of every	• •				
(Max of 32). Add total number of significan TYPE PEF	it substrate types found RCENT TYPE	(Max of 8). Final metric s		es A & B. PERCENT	HHE Metri
BLDR SLABS [16 pts]	0%	SILT [3 pt]		0%	Point
	0%	LEAF PACK/WOODY I		0%	Substrat
	5%	FINE DETRITUS [3 pt		0%	Max = 4
	0%	MUCK [0 pts]		0%	18
SAND (<2 mm) [6 pts]	5%	ARTIFICIAL [3 pts]		0%	10
Total of Percentages of 5.0	00% ^(A)	Substrate Percentage Check 100	%	(B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTI	RATE TYPES: 15		OF SUBSTRATE T	YPES: 3	
2. Maximum Pool Depth (Measure the max	kimum pool depth wit	hin the 61 meter (200 ft)	evaluation reach at	the time of	Pool Dep
evaluation. Avoid plunge pools from road of		pipes) (Check ONLY or	ne box):		Max = 3
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts]	✓	> 5 cm - 10 cm [15 pts < 5 cm [5 pts]	5]		
> 10 - 22.5 cm [25 pts]		NO WATER OR MOIS	ST CHANNEL [0 pts	s]	5
COMMENTS		MAXIMUM POO	OL DEPTH (centim	eters): 3	
3. BANK FULL WIDTH (Measured as the a	verage of 3-4 measur	ements) (Check	ONLY one box):		Bankful
> 4.0 meters (> 13') [30 pts]		> 1.0 m - 1.5 m (> 3' 3	" - 4' 8") [15 pts]		Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Į.	≤ 1.0 m (<=3' 3") [5 pts	6]		Max=30
COMMENTS OHW - 2.2' / 0.9'		AVERAGE BAN	NKFULL WIDTH (m	neters): 0.70	5
			0 (
		on <u>must</u> also be complete			
RIPARIAN ZONE AND FLOODPL RIPARIAN WIDTH	AIN QUALITY ☆N FLOODPLAIN QUAL	OTE: River Left (L) and R	light (R) as looking	downstream☆	
L R (Per Bank)	L R (Most Pred	ominant per Bank)	LR		
Wide >10m		est, Wetland orest, Shrub or Old		ervation Tillage	
Moderate 5-10m	Field	order, errial or era		or Industrial	
Narrow <5m	Residential	, Park, New Field	✓ ✓ Open	Pasture, Row Cro	pp
None	Fenced Pas	sture	Minin	g or Construction	
COMMENTS					-
FLOW REGIME (At Time of Evaluation	ation) (Check ONLY o				
Stream Flowing Subsurface flow with isolated pools	(Interstitial)		, isolated pools, no o water (Ephemer	,	1
COMMENTS_		<u> </u>	•		-
SINUOSITY (Number of ben <u>ds</u> per	r 61 m (200 ft) of chanr	el) (Check ONLY one bo	ox):		
None 0.5	1.0 1.5	2.0	3.0		
	1.0	 2.3	<u> </u>		
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate	Moderate (2 ft/100 ft	Moderate to	Severe	Severe (10 ft/10	00 ft)
a.c (o.o in roo it)		, Iniductate to			19

ADDITIONAL ST	REAM INFORMATION (This Information Must Also	be Completed):		S5-S073
QHEI P	PERFORMED? - Yes No QHEI Score	(If Yes, Atta	rch Completed QHEI For	·m)
DOWN WWH Name: CWH Name: EWH Name:			_ Distance from Evalua _ Distance from Evalua _ Distance from Evaluat	ted Stream
MAPPI	NG: ATTACH COPIES OF MAPS, INCLUDING THE EI	NTIRE WATERSHED	- DAREA. CLEARLY MAR	K THE SITE LOCATION
USGS Quadrangl	e Name: Bloomington	NRCS Soil Map P	Page: 18 NRCS So	oil Map Stream Order
County: Monroe		ship / City: Bloom	ington	
	LLANEOUS			_
Base Flow Condit	tions? (Y/N):_N Date of last precipitation:_	05/12/06	Quantity: 0.39	9
Photograph Inforr	mation:			
Elevated Turbidity	y? (Y/N): N Canopy (% open): 100	%		
Were samples co	ellected for water chemistry? (Y/N): Note la	o sample no. or id. a	and attach results) Lab N	lumber:
Field Measures:	Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µr	mhos/cm)
Is the sampling re	each representative of the stream (Y/N) Y If not	please explain:		
Additional comme	ents/description of pollution impacts:			
Performed? (Y/N) Fish Observed? (ID number. Include appropriate field dat Y/N) Voucher? (Y/N) Salamanders C s Observed? (Y/N) Voucher? (Y/N) Aqua	a sheets from the Pri		
	AWING AND NARRATIVE DESCRIPTION portant landmarks and other features of interest fo	r site evaluation an		
	S5-S073 for site topograp	_	_	
	aerial photograph, and re	source pho	otographs	

Save as pdf

Reset Form



Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek Quarter: SW

Range: R1W

Watershed: 05120202010 Channelized/Type: No/Natural **Ephemeral Stream Type: Evaluation Type:** HHEI

Evaluation Score: 28 Legal Drain (Y/N): Ν

UTME: 1767964 ft **UTMN:** 14244965 ft **USGS** Quadrangle: Bloomington

Section: Township: T9N IDEM 303(d) List: N/A OHWM Width: 2.5 feet OHWM Depth: 1.0 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area: 0.01 sq mi

Gravel/sand **Predominant Sub:**

Stream S5-S074a – Class I PHWH						
Alternatives						
Aiternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)			
4	0	0.00	0.00			
5	71	0.01	0.00			
6	61	0.01	0.00			
7	61	0.01	0.00			
8	61	0.01	0.00			
RPA 8	45	0.01	0.00			

Description of Potential Impact:

Impacts to S5-S074a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of gravel and sand. There is a no riparian corridor associated with this stream. The adjacent floodplain consists of open pasture. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S074a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S074a RIVER BASIN White River DRAINAGE AREA (mi²)	.01
LENGTH OF STREAM REACH (ft) 70 LAT. 39.22529 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54960) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERED RECOVERED RECENT OR NO RECOVERED R	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] OW SILT [3 pt] OW LEAF PACK ANO DRY DEPRIS [3 pts]	Point
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt]	Substrat
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 0%	Max = 4
✓ GRAVEL (2-64 mm) [9 pts] 50% MUCK [0 pts] 0% SAND (<2 mm) [6 pts]	18
Total of Percentages of 5 00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	АТБ
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 4	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Max=30
COMMENTS OHW - 2.5' / 1.0' AVERAGE BANKFULL WIDTH (meters): 0.90	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
☐ Wide >10m ☐ Mature Forest, Wetland ☐ Conservation Tillage ☐ Moderate 5-10m ☐ Immature Forest, Shrub or Old ☐ Urban or Industrial	
Field — Open Pasture Row Cro	nn.
Narrow <5m Residential, Park, New Field	P
None Fenced Pasture Mining or Construction COMMENTS	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
✓ None □ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10	00 ft)

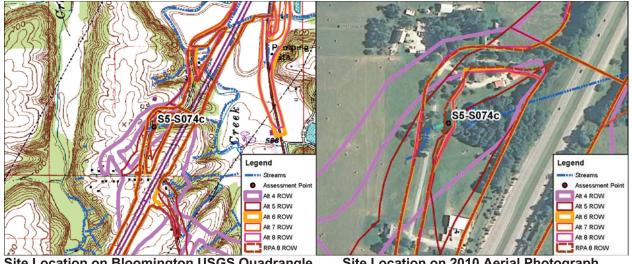
ADDITIONAL STREAM	INFORMATION (This Information I	lust Also be Comple	eted):		S5-S0/4a
QHEI PERFOR	RMED? - Yes No QHEI Sc	ore (If Y	es, Attach	n Completed QHEI Forn	n)
	M DESIGNATED USE(S)				
WWH Name: Griffy	Creek			Distance from Evaluate	ed Stream
CWH Name: _				Distance from Evaluate	d Stream
EWH Name: _				Distance from Evaluate	d Stream _
	TACH COPIES OF MAPS, INCLUDIN	G THE ENTIRE WATE	ERSHED A	AREA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Name	e: Bloomington	NRCS Soi	il Map Pag	ge: 18 NRCS Soil	Map Stream Order
County: Monroe		Township / City:	Bloomin	gton	
MISCELLANE	ous				
Base Flow Conditions? (Y/N):_N Date of last precipita	tion:_ 05/12/06	6	Quantity: 0.39	
Photograph Information:					
Elevated Turbidity? (Y/N): N Canopy (% open):	100%			
Were samples collected	for water chemistry? (Y/N): N	(Note lab sample no	o. or id. an	d attach results) Lab Nu	ımber:
	p (°C) Dissolved Oxygen (m		S.U.)	Conductivity (µm	hos/cm)
Is the sampling reach re	presentative of the stream (Y/N)	If not, please expl	lain:		
Additional comments/de	scription of pollution impacts:				
BIOTIC EVAL	UATION				
Performed? (Y/N): _ N	(If Yes, Record all observations ID number. Include appropriate				les must be labeled with the site ssessment Manual)
Fish Observed? (Y/N) Frogs or Tadpoles Obse	_ `	anders Observed? (Y Aquatic Macroinv	/	Voucher? (Y/N)	Voucher? (Y/N)
Comments Regarding Bi	ology:				
DRAWIN	G AND NARRATIVE DESCR	IPTION OF STRE	FAM RE	ACH (This must h	ne completed):
	landmarks and other features of in			· · · · · · · · · · · · · · · · · · ·	
	See Stream Assessm	ent Form			
•			a mar		
FLOW	S5-S074a for site	copographic	c map	1	

PHWH Form Page - 2

aerial photograph, and resource photographs

Save as pdf





Site Location on Bloomington USGS Quadrangle

Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream

Stream Name: Unnamed Trib. Griffy Creek Quarter: SW

Range: R1W Watershed: 05120202010 Channelized/Type: No/Natural Ephemeral **Stream Type: Evaluation Type:** HHEI

Evaluation Score: 28 Legal Drain (Y/N): Ν

UTME: 1768102 ft **UTMN:** 14245013 ft **USGS** Quadrangle: Bloomington

Section: Township: T9N IDEM 303(d) List: N/A OHWM Width: 2.5 feet OHWM Depth: 1.0 feet **USCOE Jurisdiction:** Yes **IDEM Jurisdiction:** Yes Watershed Area:

0.01 sq mi Gravel/sand **Predominant Sub:**

Stream S5-S074c – Class I PHWH					
Alternatives Length of Impact (feet) Area of Impact (acres) Riparian Impact (acre					
4	0	0.00	0.00		
5	125	0.01	0.08		
6	114	0.01	0.01		
7	114	0.01	0.01		
8	114	0.01	0.01		
RPA 8	65	0.01	0.00		

Description of Potential Impact:

Impacts to S5-S074c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The predominant substrate consists of gravel and sand. There is no riparian corridor where the Alternatives cross this stream. The adjacent floodplain consists of new fields. Photographs taken upstream and downstream near the area where these Alternatives cross S5-S074c are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form

28

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S074c DRAINAGE AREA (mi²) 0.01 SITE NUMBER 200 LAT. **39.22542** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.54912) (Natural-Class I) DATE 05/12/06 A Rogers SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% **Substrate** 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 405% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 50% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 18 45% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 5.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 15 TOTAL NUMBER OF SUBSTRATE TYPES: 3 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 5 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.5' / 1.0' AVERAGE BANKFULL WIDTH (meters): 0.90 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 >3 STREAM GRADIENT ESTIMATE

Severe (10 ft/100 ft)

Moderate (2 ft/100 ft)

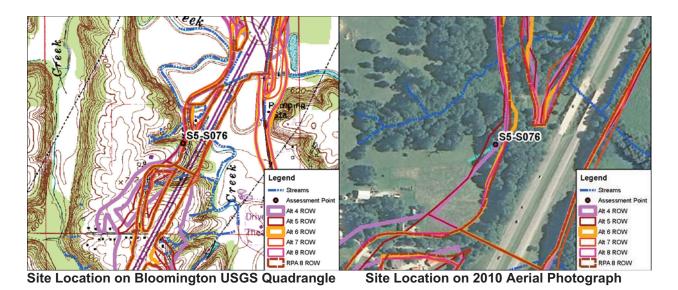
Flat (0.5 ft/100 ft)

✓ Flat to Moderate

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):			
QHEI PERFORMED? - Yes ✓ No QHEI Score	(If Yes, Attach Completed QHEI Form)			
DOWNSTREAM DESIGNATED USE(S) WWH Name: Griffy Creek CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream			
	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: 18 NRCS Soil Map Stream Order				
County: Monroe Towns	nip / City:Bloomington			
MISCELLANEOUS Base Flow Conditions? (Y/N):_N Date of last precipitation: Photograph Information:	05/12/06 Quantity: 0.39			
Elevated Turbidity? (Y/N): N Canopy (% open): 100%	<u>/6</u>			
Were samples collected for water chemistry? (Y/N): (Note lab	sample no. or id. and attach results) Lab Number:			
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)			
Is the sampling reach representative of the stream (Y/N) If not,	please explain:			
Additional comments/description of pollution impacts:				
ID number. Include appropriate field data Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Of	collections optional. NOTE: all voucher samples must be labeled with the site sheets from the Primary Headwater Habitat Assessment Manual) oserved? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)			
	OF STREAM REACH (This <u>must</u> be completed): site evaluation and a narrative description of the stream's location			
See Stream Assessment For S5-S074c for site topograph, and s	raphic map,			

Save as pdf

Reset Form



Aquatic Resource: Stream USGS Qua Stream Name: Unnamed Trib. Griffy Creek Section:

Quarter: SW Range: R1W

Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI
Evaluation Score: 27

Legal Drain (Y/N): N

UTME: 17687775 ft **UTMN**: 14245872 ft

USGS	Quadrangle:	Bloomington
0363	Quauranqie.	Dioonnington

Section: 8
Township: T9N
IDEM 303(d) List: N/A
OHWM Width: 3.5 feet
OHWM Depth: 0.7 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.01 sq mi

Watershed Area: 0.01 sq mi Predominant Sub: Sand/silt

Stream S5-S076 – Class I PHWH					
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)		
4	44	0.01	0.61		
5	275	0.02	0.84		
6	0	0.00	0.29		
7	27	0.01	0.43		
8	23	0.01	0.44		
RPA 8	0	0.00	0.32		

Description of Potential Impact:

Impacts to S5-S076 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately sand and silt. There is a moderately-wide riparian buffer associated with this stream. The adjacent floodplain consists of mature forests along both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S076 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

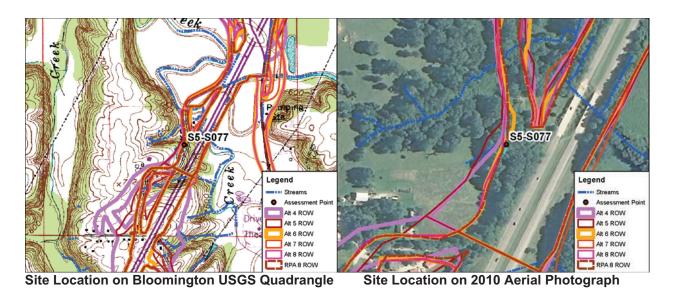


SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S076 RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ff) 200 LAT. 39.22777 LONG. RIVER CODE RIVER MILE	
DATE 10/12/11 SCORER DEW/KSS COMMENTS (Long: -86.54673) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVE	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt]	Substrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt]	Max = 4
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ O%	12
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] ✓ > 1.0 m (-3' 3") [5 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] ✓ > 1.0 m (-3' 3") [5 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Riv	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 1.07 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10m Wide >10m Woderate 5-10m Noderate 5-10m L R (Most Predominant per Bank) Moderate 5-10m Woderate 5-10m L R (Most Predominant per Bank) L R (Most Predominant per Bank) Woderate 5-10m Urban or Industrial	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Wide >10m Narrow <5m Narrow <5m Narrow <5m Residential, Park, New Field Flood Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Wide >10m Narrow <5m Narrow <5m Narrow <5m Residential, Park, New Field Flood Residential, Park, New Field Flood Residential, Park, New Field Flood Residential, isolated pools, no flow (Intermittent) FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/0.7' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Note: RIPARIAN WIDTH L R (Per Bank) Wide > 10m Wide > 10m Narrow < 5m Narrow < 5m Residential, Park, New Field Narrow < 5m None COMMENTS FLOOMENTS FLOOR REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] COMMENTS OHW = 3.5'/0.7' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Residential, Park, New Field Narrow <5m None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] 1.0 m (<=3' 3") [5 pts] 2 m (<=3' 3") [5 pts] 3 m (<=3' 3") [5 pts] 4 m (<=3' 3") [5 pts] 5 m (<=3' 3") [5 pts] 6 m (<=3' 3") [5 pts] 1.0 m (<=3' 3") [5 pts] 5 m (<=3' 3") [5 pts] 6 m (<=3' 3") [5 pts] 6 m (<=3' 3") [5 pts] 6 m (<=3' 3") [5 pts] 7 m (<=3' 3") [5 pts] 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Comp	S5-S0 pleted):	176
QHEI PERFORMED? - Yes	V No QHEI Score (If	Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED		,	
WWH Name: Griffy Creek	003E(3)	Distance from Evaluated Stream	
CWH Name:		Distance from Evaluated Stream	
EWH Name:		Distance from Evaluated Stream	
MAPPING: ATTACH COPIES O	F MAPS, INCLUDING THE <u>ENTIRE</u> WAT	TERSHED AREA. CLEARLY MARK THE SITE LOCATION	
USGS Quadrangle Name: Bloomington	NRCS S	oil Map Page: NRCS Soil Map Stream Order	
County: Monroe	Township / City:	Bloomington	
\ <u> </u>	ate of last precipitation:	Quantity:	
Photograph Information:			
Elevated Turbidity? (Y/N): _ N	Canopy (% open): 5%		
Were samples collected for water chemis	try? (Y/N): N (Note lab sample r	no. or id. and attach results) Lab Number:	_
		(S.U.) Conductivity (µmhos/cm)	
Is the sampling reach representative of th	e stream (Y/N) If not, please ex	plain:	
Additional comments/description of polluti	on impacts:		
BIOTIC EVALUATION			
, -		s optional. NOTE: all voucher samples must be labeled with the om the Primary Headwater Habitat Assessment Manual)	site
Fish Observed? (Y/N) Voucher? Frogs or Tadpoles Observed? (Y/N)	(Y/N) Salamanders Observed? Voucher? (Y/N) Aquatic Macroir	(Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)	
Comments Regarding Biology:	N N	N /	
DRAWING AND NARR	ATIVE DESCRIPTION OF STR	REAM REACH (This must be completed):	_
		uation and a narrative description of the stream's location	
,		,	
Coo Ctroom	Assessment Form		
	r site topographic	-	
aerial pho	tograph, and resour	ce photographs	

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Reset Form



Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib. Griffy Creek Section: 8

Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A

05120202010 OHWM Width: 1.7 feet Watershed: Channelized/Type: No/Natural OHWM Depth: 0.4 feet Stream Type: **Ephemeral USCOE** Jurisdiction: Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 40 Watershed Area: 0.01 sq mi
Legal Drain (Y/N): N Predominant Sub: Sand/gravel

UTME: 1768841 ft **UTMN**: 14245882 ft

Stream S5-S077 – Class II PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	221	0.01	0.31
5	221	0.01	0.31
6	168	0.01	0.30
7	192	0.01	0.29
8	212	0.01	0.29
RPA 8	98	0.01	0.26

Description of Potential Impact:

Impacts to S5-S077 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately sand and gravel. There is a moderately-wide riparian buffer associated with this stream. The adjacent floodplain consists of mature forests along both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S077 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form

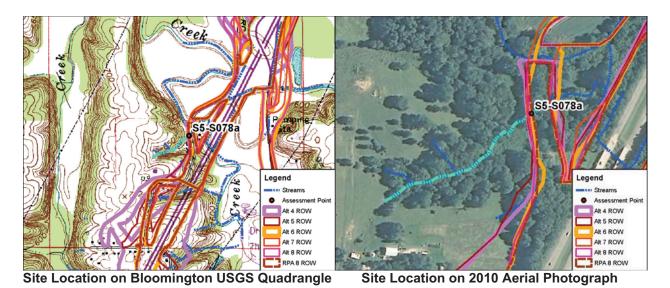
40

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S077 DRAINAGE AREA (mi²) 0.01 SITE NUMBER 200 LAT. **39.22780** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.54649) (Natural-Class II) DATE 05/12/06 A Rogers SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 10% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 5% 0% **Substrate** 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 5% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 39% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 20 41% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock 15 TOTAL NUMBER OF SUBSTRATE TYPES: 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.7' / 0.4' AVERAGE BANKFULL WIDTH (meters): 0.52 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ **FLOODPLAIN QUALITY** RIPARIAN WIDTH (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) ✓ Flat to Moderate Moderate (2 ft/100 ft) Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Griffy Creek CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: 18 NRCS Soil Map Stream Order
County: Monroe Township / City: Bloomington
MISCELLANEOUS Base Flow Conditions? (Y/N): N Date of last precipitation: 05/12/06 Quantity: 0.39
Photograph Information:
Elevated Turbidity? (Y/N): N Canopy (% open): 20%
Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N) Comments Regarding Biology: DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
See Stream Assessment Form S5-S077 for site topographic map, aerial photograph, and resource photographs

Save as pdf

Reset Form



Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib. Griffy Creek **Quarter:** SE

Range: R1W
Watershed: 05120202010
Channelized/Type: No/Natural
Stream Type: Ephemeral
Evaluation Type: HHEI

 Evaluation Score:
 33
 W

 Legal Drain (Y/N):
 N
 P

 UTME: 1768817 ft
 UTMN: 14246329 ft

Section: 8 Township: T9N

IDEM 303(d) List: N/A
OHWM Width: 6.0 feet
OHWM Depth: 0.4 feet
USCOE Jurisdiction: Yes
IDEM Jurisdiction: Yes
Watershed Area: 0.04 sq mi

Watershed Area: 0.04 sq mi Predominant Sub: Sand/silt

Stream S5-S078a – Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	65	0.01	0.23
5	64	0.01	0.23
6	44	0.01	0.15
7	65	0.01	0.22
8	55	0.01	0.19
RPA 8	34	0.01	0.10

Description of Potential Impact:

Impacts to S5-S078a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately sand and silt. There is a narrow riparian buffer associated with this stream. The floodplain consists of old fields along both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S078a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



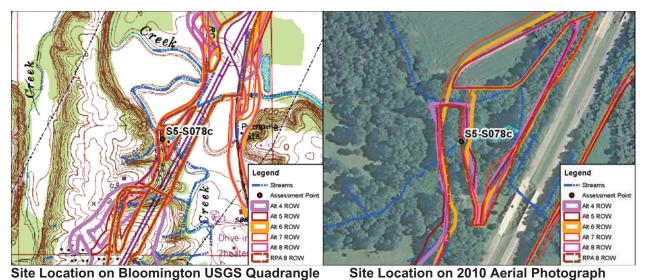
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S078a RIVER BASIN White River DRAINAGE AREA (mi²)	0.04
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22902 LONG. RIVER CODE RIVER MILE	
DATE 10/17/11 SCORER DEW/KSS COMMENTS (Long: -86.54657) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	ı HHEI
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] BEDROCK [16 pt] D'A D'B D'B D'B D'B D'B D'B D'B	Substrat
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt]	Max = 4
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts] 0%	13
Total of Percentages of 5.00% (A) Substrate Percentage (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts]	Bankful Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.82	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.82 This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.82 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ↑NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R (M	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m None None Residential, Park, New Field PLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermitten) Moder (Intermitten) Noist Channel, isolated pools, no flow (Intermitten)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m None None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermitten) Moder (Intermitten) Noist Channel, isolated pools, no flow (Intermitten)	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Per Bank None COMMENTS Fenced Pasture Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral) SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Mature Forest, Shrub or Old Field Narrow <5m None Residential, Park, New Field Open Pasture, Row C Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral))	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts]	Width Max=30 20
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 6'/0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30 20 rop n tt)

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Griffy Creek	_ Distance from Evaluated Stream _
CWH Name:	_ Distance from Evaluated Stream _
EWH Name:	Distance from Evaluated Stream _
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EN	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Monroe Townsh	nip / City: Bloomington
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:_	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 30%	
Were samples collected for water chemistry? (Y/N): (Note lab	sample no. or id. and attach results) Lab Number:
	pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, p	please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
N	
,	collections optional. NOTE: all voucher samples must be labeled with the site sheets from the Primary Headwater Habitat Assessment Manual)
	served? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N)
Comments Regarding Biology:	
-	
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
	site evaluation and a narrative description of the stream's location
•	•

FLOW -

See Stream Assessment Form S5-S078a for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Griffy CreekSection:8Quarter:SETownship:T9NPage 10Page 20Page 20Page 20

Range: R1W IDEM 303(d) List: N/A 05120202010 OHWM Width: Watershed: 6.0 feet Channelized/Type: No/Natural OHWM Depth: 0.4 feet Stream Type: **Ephemeral USCOE** Jurisdiction: Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 33 Watershed Area: 0.04 sq mi
Legal Drain (Y/N): N Predominant Sub: Sand/silt

UTME: 1768912 ft **UTMN**: 14246407 ft

Stream S5-S078c – Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	72	0.01	0.22
5	60	0.01	0.22
6	74	0.01	0.21
7	22	0.01	0.10
8	23	0.01	0.10
RPA 8	25	0.01	0.09

Description of Potential Impact:

Impacts to S5-S078c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is mostly sand and silt. There is a narrow riparian buffer associated with this stream. The right bank floodplain consists of a residential yard and the left bank is predominately new field. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S078c are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



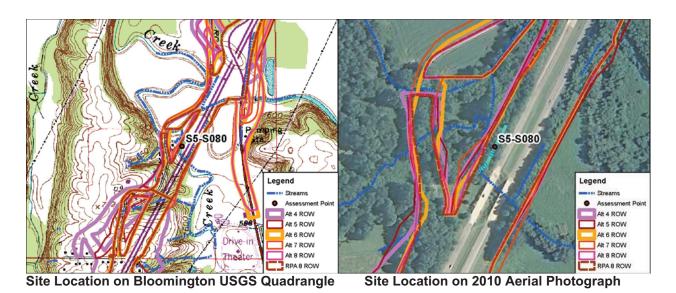
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S078c RIVER BASIN White River DRAINAGE AREA (mi²)	.04
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22923 LONG. RIVER CODE RIVER MILE	
DATE 10/17/11 SCORER DEW/KSS COMMENTS (Long: -86.54623) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC MODIFICATIONS:	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT PERCENT	Metri
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt]	Substrat
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt]	Max = 4
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	13
Total of Percentages of 5 00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
<pre></pre>	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW = 6'/0.4' AVERAGE BANKFULL WIDTH (meters): 1.83	20
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Field Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	p
None Fenced Pasture Mining or Construction	
COMMENTS	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	
COMMENTS COMMENTS	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 1.0 2.0 3.0 3.0 5 1.5 2.5 3	
None 1.0 2.0 7 3.0 0.5 1.5 2.5 >3	
☐ None ☐ 1.0 ☐ 2.0 ☐ 3.0)O ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	S5-S078c
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Att	rach Completed OHEL Form)
	adi odilpido di Eli olinj
DOWNSTREAM DESIGNATED USE(S) WWH Name: Griffy Creek	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHE	D AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map	Page: NRCS Soil Map Stream Order
	nington
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:_	Quantity:
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 30%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id.	and attach results) Lab Number:
	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections options ID number. Include appropriate field data sheets from the P	·
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebra	Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	REACH (This must be completed):
Include important landmarks and other features of interest for site evaluation a	
·	,
A a a . .	



See Stream Assessment Form S5-S078c for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Unnamed Trib. Griffy CreekSection:8Quarter:SETownship:T9NRange:R1WIDEM 303(d) List:N/A

Watershed: 05120202010 OHWM Width: 2.1 feet Channelized/Type: Yes/Roadside Ditch OHWM Depth: 0.4 feet **USCOE Jurisdiction: Stream Type:** Ephemeral No **Evaluation Type:** HHEI **IDEM Jurisdiction:** No

Evaluation Score: 43 Watershed Area: 0.01 sq mi
Legal Drain (Y/N): N Predominant Sub: Clay

UTME: 1769236 ft **UTMN**: 14246325 ft

Stream S5-S080 – Modified Class II PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	274	0.01	0.01
5	274	0.01	0.01
6	274	0.01	0.01
7	274	0.01	0.01
8	274	0.01	0.01
RPA 8	274	0.01	0.01

Description of Potential Impact:

Impacts to S5-S080 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. This roadside ditch flows along SR 37 directly into Griffy Creek. There is a narrow riparian buffer associated with this clay bottom ditch. The floodplain consists of the urban roadway on the left bank and immature forest on the right. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S080 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream and toward roadway



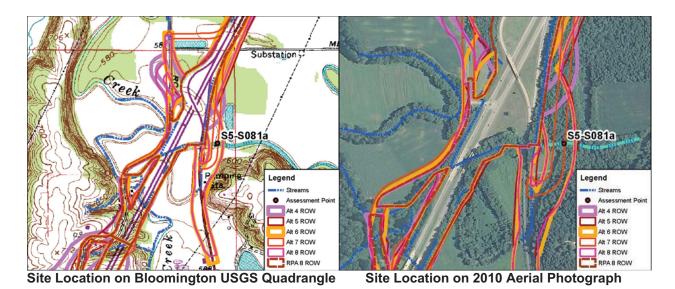
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S080 RIVER BASIN White River DRAINAGE AREA (mi²)	.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.22901 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54509) (Roadside Ditch-Modified Class	s II)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHEI
TYPE PERCENT TYPE PERCENT	Metric Points
BLDR SLABS [16 pts]	Politic
BEDROCK [16 pt] O% FINE DETRITUS [3 pts]	Substrat Max = 4
COBBLE (65-256 mm) [12 pts]	Wax - 4
☐ GRAVEL (2-64 mm) [9 pts]	8
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	30
COMMENTS ditch is a long pool MAXIMUM POOL DEPTH (centimeters): 25	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
<pre></pre>	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	max oo
COMMENTS OHW - 2.1' / 0.4' AVERAGE BANKFULL WIDTH (meters): 0.64	5
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m	
Field Urban or industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	ηp
None Fenced Pasture Mining or Construction COMMENTS	
FLOW DECIME (At Time of Evaluation) (Check ONLY and hox):	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	1
	,
Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	
COMMENTS_ SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	-
COMMENTS	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	-

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Attach Completed QHEI Form)			
DOWNSTREAM DESIGNATED USE(S) VWWH Name: Griffy Creek Distance from Evaluated Stream CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: 18 NRCS Soil Map Stream Order			
County: Monroe Township / City: Bloomington			
MISCELLANEOUS Base Flow Conditions? (Y/N): N Date of last precipitation: 05/12/06 Quantity: 0.39			
Photograph Information: 111 Upstream / 112 Downstream / 113 Right Bank / 114 Left Bank			
Elevated Turbidity? (Y/N): Y Canopy (% open): 90% Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: Field Measures: Temp (°C) Dissolved Oxygen (mg/l) Is the sampling reach representative of the stream (Y/N) If not, please explain: BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Comments Regarding Biology:			
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed): Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location			



See Stream Assessment Form S5-S080 for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name:Beanblossom CreekSection:8Quarter:NETownship:T9NRange:R1WIDEM 303(d) List:YesWatershed:05120202010OHWM Width:64.0 feet

Channelized:NoOHWM Depth:16.0 feetStream Type:PerennialUSCOE Jurisdiction:YesEvaluation Type:QHEIIDEM Jurisdiction:Yes

Evaluation Score: 51.5 **Watershed Area:** 42.73 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Hardpan

UTME: 1770816 ft **UTMN**: 14247338 ft

Stream S5-S081a – Warm Water Habitat				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	0	0.00	0.17	
5	443	0.65	1.50	
6	370	0.54	1.34	
7	123	0.18	0.56	
8	386	0.57	1.35	
RPA 8	0	0.00	0.17	

Description of Potential Impact:

Impacts to S5-S081a at this location for the Alternatives are listed in the table above. Segments S5-S081a and S5-S081b were evaluated together. Segment S5-S081b includes the bridge carrying old SR 37 over Beanblossom Creek while S5-S081a is the segment upstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and low sinuosity where the Alternatives cross this stream. Hardpan is the predominant substrate. The stream has a wide riparian corridor associated with its right bank and a narrow to wide riparian buffer along its left bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S081a segment are on the second page of this form. Implementation of the RPA 8 will decrease the amount of impacts to Beanblossom Creek at this location.



Photograph Taken Upstream



Photograph Taken Downstream

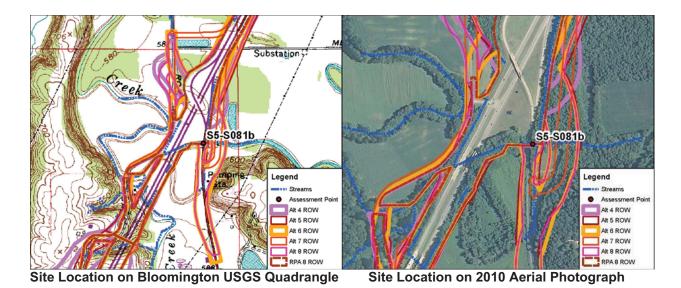
OWQ Biological Studies QHEI (Qualitative Habitat Evaluation Index) IDEM Sample # bioSample # Stream Name 381ab Beanblosson Creek M Habitat Sample Date County Macro Sample Type Surveyor QHEI Score: 51,5 Complete 4/24/12 Monroe 1] SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate % and check every type present Check ONE (Or 2 & average) **OTHER TYPES** ORIGIN **BEST TYPES** QUALITY PREDOMINANT PRESENT TOTAL % PREDOMINANT PRESENT TOTAL % S HEAVY [-2] PR PR PR PR □ LIMESTONE [1] I MODERATE [-1] HARDPAN [4] BLDR/SLABS[10] TILLS[1] NORMAL[0] ☐☐ BOULDER[9] ☐ ☐ DETRITUS[3] WETLANDS [0] Substrate ☐ FREE [1] □□ COBBLE[8] □□ MUCK[2] Ø HARDPAN [0] □ □ SILT[2] N N ☐ ☐ GRAVELI71 SANDSTONE [0] SAND[6] ☐☐ ARTIFICIAL [0] ☐☐ RIP/RAP [0] EXTENSIVE [-2] MODERATE -1 ☐☐ BEDROCK [5] (Score natural substrates; ignore LACUSTRINE [0] NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) NORMAL[0] SHALE [-1] Maximum □ 3 or less [0] □ COAL FINES [-2] ☐ NONE[1] 20 Comments 2] INSTREAM COVER Indicate presence 0 to 3 and estimate percent: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest AMOUNT quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log Check ONE (Or 2 & average) that is stable, well developed root wad in deep/fast water, or deep, well-defined, functional pools.) ☐ EXTENSIVE > 75% [11] MODERATE 25 - 75% [7] UNDERCUT BANKS [1] POOLS > 70cm [2] OXBOWS, BACKWATERS [1] SPARSE 5 - < 25% [3] OVERHANGING VEGETATION [1] ROOTWADS[1] AQUATIC MACROPHYTES [1] ☐ NEARLY ABSENT < 5% [1] 10 SHALLOWS (IN SLOW WATER) [1] BOULDERS[1] | LOGS OR WOODY DEBRIS[1] Cover 3 ROOTMATS[1] Maximum 20 Comments 3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY EXCELLENT[7] X NONE[6] HIGH [4] HIGH [3] MODERÁTE[2] GOOD [5] MODERATE [3] RECOVEREDI4 Channel LOW[2] NONE[1] FAIR [3] RECOVERING [3] Maximum POOR[1] RECENT OR NO RECOVERY [1] 20 Comments 4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) RIPARIAN WIDTH LR FLOOD PLAIN QUALITY River right looking downstream L EROSION □ ▼ FOREST, SWAMP [3] □ □ CONSERVATION TILLAGE [1] ☐☐ SHRUB OR OLD FIELD [2] ☑ NONE/LITTLE[3] □ ■ MODERATE 10-50m [3] □ □ URBAN OR INDUSTRIAL [0] ☐ ☐ MODERATE [2] □ NARROW 5-10m [2] RESIDENTIAL, PARK, NEW FIELD [1] MINING / CONSTRUCTION [0] ☐ ☐ FENCED PASTURE [1] ☐☐ HEAVY/SEVERE[1] □ □ VERY NARROW [1] Indicate predominant land use(s) □□ NONE[0] OPEN PASTURE, ROWCROP [0] past 100m riparian. Riparian Maximum 2.5+3+2 Comments 10 5] POOL/GLIDE AND RIFFLE/RUN QUALITY **MAXIMUM DEPTH** CHANNEL WIDTH CURRENT VELOCITY Recreation Potential Check ONE (ONLY!) Check ALL that apply Check ONE (Or 2 & average) (Circle one and comment on back) ≥ >1m[6] TORRENTIAL [-1] SLOW [1] ☑ POOL WIDTH > RIFFLE WIDTH [2] Primary Contact ☐ Secondary Contact VERY FAST [1] 0.7-<1m[4] POOL WIDTH = RIFFLE WIDTH [1] INTERSTITIAL [-1] INTERMITTENT [-2] 0.4-<0.7m[2] □ POOLWIDTH < RIFFLE WIDTH [0]</p> FAST[1] Pool/ MODERATE [1] ☐ EDDIES[1] Current 0.2-<0.4m[1] □ < 0.2m[0] Maximum Indicate for reach - pools and riffles. Comments Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: NORIFFLE [metric = 0] Check ONE (Or 2 & average) RIFFLE/RUN EMBEDDEDNESS RIFFLE DEPTH **RUN DEPTH** RIFFLE/RUN SUBSTRATE ☐ BEST AREAS > 10cm [2] ☐ MAXIMUM > 50cm [2] ☐ STABLE (e.g., Cobble, Boulder) [2] ☐ NONE[2] BEST AREAS 5 - 10cm [1] MAXIMUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1] LOW[1] Riffle/ BEST AREAS < 5 cm UNSTABLE (e.g., Fine Gravel, Sand) [0] ☐ MODERATE [0] Run ☐ EXTENSIVE [-1] Maximum [metric = 0] Comments 8 6] GRADIENT (3 ft/mi) □ VERY LOW - LOW [2-4] %POOL: %GLIDE: Gradient 10 Maximum ☑ MODERATE [6-10] %RUN: 90 %RIFFLE: 10 ☐ HIGH-VERY HIGH [10-6] DRAINAGE AREA (123 mi2)

OHW 64' x 16'

IDEM 07/06/10

581a,b

DEV			tudies QHEI (Q		Evaluation index)
Sample #	bioSamp	le# Stream Name Beanblo		Location	
Surveyor Sam	pie Date		SSOM. Macro SampleType	Habitat	
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Impacts/M	liscellar	neous		A STATE OF THE STA	
Major Susp	ected Impa	icts (Check all that apply)		Miscellaneous QH	El Information
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Indus		Channelization	Aesthetic ratio	ng (2-70):1 _/	in: 90 of stream? Kes
□ wwt		☐ Riparian Removal ☐ Flow Alteration		% GIIC	
Agric		CSOs	Canopy Cover (Branch parameterized	ol: 10
Silvic		Mining	General QHEI No		
Cons		Landfills		400 read	n Raprositive Sample
Urbar		□ Natural		2 272	Sample
Pollution Impa	ect Comme	nts:	<u>_</u>		30. 1-30
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Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Beanblossom Creek Section: 8

Quarter: ΝE Township: T9N Range: R1W IDEM 303(d) List: Yes Watershed: 05120202010 OHWM Width: 64.0 feet Channelized: **OHWM Depth:** 16.0 feet No

Channelized:NoOHWM Depth:16.0 feStream Type:PerennialUSCOE Jurisdiction:YesEvaluation Type:QHEIIDEM Jurisdiction:Yes

Evaluation Score: 51.5 **Watershed Area:** 42.73 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Hardpan

UTME: 1770816 ft **UTMN**: 14247338 ft

	Stream S5_S5_S081b – Warm Water Habitat						
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)				
4	13	0.01	0.00				
5	32	0.04	0.00				
6	32	0.04	0.00				
7	15	0.02	0.00				
8	32	0.04	0.00				
RPA 8	15	0.02	0.00				

Description of Potential Impact:

Impacts to S5_S081b at this location for the Alternatives are listed in the table above. Segments S5_S081a and S5_S081b were evaluated together. Segment S5_S081b includes the bridge carrying old SR 37 over Beanblossom Creek while S5_S081a is the segment upstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and low sinuosity where the Alternatives cross this stream. Hardpan is the predominant substrate. The stream has a wide riparian corridor associated with its right bank and a narrow to wide riparian buffer along its left bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5_S081a segment are on the second page of this form. Implementation of RPA 8 will decrease the amount of impacts to Beanblossom Creek at this location.



Photograph Taken Upstream



Photograph Taken Downstream

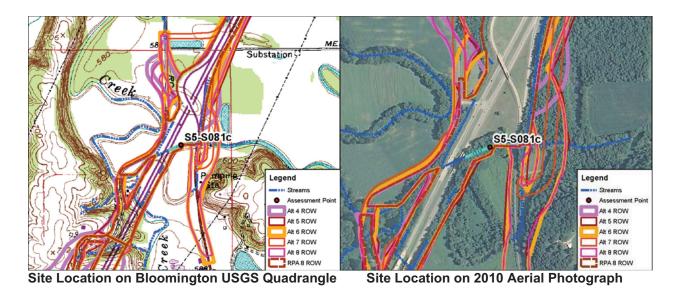
OWQ Biological Studies QHEI (Qualitative Habitat Evaluation Index) IDEM Sample # bioSample # Stream Name 381ab Beanblosson Creek M Habitat Sample Date County Macro Sample Type Surveyor QHEI Score: 51,5 Complete 4/24/12 Monroe 1] SUBSTRATE Check ONLY Two predominant substrate TYPE BOXES; estimate % and check every type present Check ONE (Or 2 & average) **OTHER TYPES** ORIGIN **BEST TYPES** QUALITY PREDOMINANT PRESENT TOTAL % PREDOMINANT PRESENT TOTAL % S HEAVY [-2] PR PR PR PR □ LIMESTONE [1] I MODERATE [-1] HARDPAN [4] BLDR/SLABS[10] TILLS[1] NORMAL[0] ☐☐ BOULDER[9] ☐ ☐ DETRITUS[3] WETLANDS [0] Substrate ☐ FREE [1] □□ COBBLE[8] □□ MUCK[2] Ø HARDPAN [0] □ □ SILT[2] N N ☐ ☐ GRAVELI71 SANDSTONE [0] SAND[6] ☐☐ ARTIFICIAL [0] ☐☐ RIP/RAP [0] EXTENSIVE [-2] MODERATE -1 ☐☐ BEDROCK [5] (Score natural substrates; ignore LACUSTRINE [0] NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) NORMAL[0] SHALE [-1] Maximum □ 3 or less [0] □ COAL FINES [-2] ☐ NONE[1] 20 Comments 2] INSTREAM COVER Indicate presence 0 to 3 and estimate percent: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest AMOUNT quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log Check ONE (Or 2 & average) that is stable, well developed root wad in deep/fast water, or deep, well-defined, functional pools.) ☐ EXTENSIVE > 75% [11] MODERATE 25 - 75% [7] UNDERCUT BANKS [1] POOLS > 70cm [2] OXBOWS, BACKWATERS [1] SPARSE 5 - < 25% [3] OVERHANGING VEGETATION [1] ROOTWADS[1] AQUATIC MACROPHYTES [1] ☐ NEARLY ABSENT < 5% [1] 10 SHALLOWS (IN SLOW WATER) [1] BOULDERS[1] | LOGS OR WOODY DEBRIS[1] Cover 3 ROOTMATS[1] Maximum 20 Comments 3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY EXCELLENT[7] X NONE[6] HIGH [4] HIGH [3] MODERÁTE[2] GOOD [5] MODERATE [3] RECOVEREDI4 Channel LOW[2] NONE[1] FAIR [3] RECOVERING [3] Maximum POOR[1] RECENT OR NO RECOVERY [1] 20 Comments 4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) R RIPARIAN WIDTH L R FLOOD PLAIN QUALITY River right looking downstream L EROSION □ ▼ FOREST, SWAMP [3] □ □ CONSERVATION TILLAGE [1] ☐☐ SHRUB OR OLD FIELD [2] ☑ NONE/LITTLE[3] □ ■ MODERATE 10-50m [3] □ □ URBAN OR INDUSTRIAL [0] ☐ ☐ MODERATE [2] □ NARROW 5-10m [2] RESIDENTIAL, PARK, NEW FIELD [1] MINING / CONSTRUCTION [0] ☐ ☐ FENCED PASTURE [1] ☐☐ HEAVY/SEVERE[1] □ □ VERY NARROW [1] Indicate predominant land use(s) □□ NONE[0] OPEN PASTURE, ROWCROP [0] past 100m riparian. Riparian Maximum 2.5+3+2 Comments 10 5] POOL/GLIDE AND RIFFLE/RUN QUALITY **MAXIMUM DEPTH** CHANNEL WIDTH CURRENT VELOCITY Recreation Potential Check ONE (ONLY!) Check ALL that apply Check ONE (Or 2 & average) (Circle one and comment on back) ≥ >1m[6] TORRENTIAL [-1] SLOW [1] ☑ POOL WIDTH > RIFFLE WIDTH [2] Primary Contact ☐ Secondary Contact VERY FAST [1] 0.7-<1m[4] POOL WIDTH = RIFFLE WIDTH [1] INTERSTITIAL [-1] INTERMITTENT [-2] 0.4-<0.7m[2] □ POOLWIDTH < RIFFLE WIDTH [0]</p> FAST[1] Pool/ MODERATE [1] ☐ EDDIES[1] Current 0.2-<0.4m[1] □ < 0.2m[0] Maximum Indicate for reach - pools and riffles. Comments Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: NORIFFLE [metric = 0] Check ONE (Or 2 & average) RIFFLE/RUN EMBEDDEDNESS RIFFLE DEPTH **RUN DEPTH** RIFFLE/RUN SUBSTRATE ☐ BEST AREAS > 10cm [2] ☐ MAXIMUM > 50cm [2] ☐ STABLE (e.g., Cobble, Boulder) [2] ☐ NONE[2] BEST AREAS 5 - 10cm [1] MAXIMUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1] LOW[1] Riffle/ BEST AREAS < 5 cm UNSTABLE (e.g., Fine Gravel, Sand) [0] ☐ MODERATE [0] Run ☐ EXTENSIVE [-1] Maximum [metric = 0] Comments 8 6] GRADIENT (3 ft/mi) □ VERY LOW - LOW [2-4] %POOL: %GLIDE: Gradient 10 Maximum ☑ MODERATE [6-10] %RUN: 90 %RIFFLE: 10 ☐ HIGH-VERY HIGH [10 - 6] DRAINAGE AREA (123 mi2)

OHW 64' x 16'

IDEM 07/06/10

581a,b

DEV			tudies QHEI (Q		Evaluation index)
Sample #	bioSamp	le# Stream Name Beanblo		Location	
Surveyor Sam	pie Date		SSOM. Macro SampleType	Habitat	
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Impacts/M	liscellar	neous		A STATE OF THE STA	
Major Susp	ected Impa	icts (Check all that apply)		Miscellaneous QH	El Information
None		Suburban	Subjective ratio	ng (1-10): % Riff	
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Agric		CSOs	Canopy Cover (Branch parameterized	ol: 10
Silvic		Mining	General QHEI No		
Cons		Landfills		400 read	n Raprositive Sample
Urbar		□ Natural		2 272	Sample
Pollution Impa	ect Comme	nts:	<u>_</u>		30. 1-30
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Aquatic Resource:StreamUSGS Quadrangle:BloomingtonStream Name:Beanblossom CreekSection:8

Beanblossom Creek Quarter: ΝE Township: T9N Range: R1W IDEM 303(d) List: Yes Watershed: 05120202010 **OHWM Width:** 64.0 feet Channelized: **OHWM Depth:** 16.0 feet Yes

Channelized:YesOHWM Depth:16.0 fStream Type:PerennialUSCOE Jurisdiction:YesEvaluation Type:QHEIIDEM Jurisdiction:YesEvaluation Score:34.75Watershed Area:42.73

Evaluation Score: 34.75 **Watershed Area:** 42.73 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Silt/detritus

UTME: 1770143 ft **UTMN**: 14247299 ft

Stream S5_S081c – Modified Warm Water Habitat						
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)			
4	575	0.69	1.11			
5	575	0.69	1.31			
6	575	0.69	1.24			
7	575	0.69	1.11			
8	575	0.69	1.23			
RPA 8	575	0.69	1.11			

Description of Potential Impact:

Impacts to S5_S081c at this location for the Alternatives are listed in the table above. Stream segments S5_S081c, S5_S081d, and S5_S081e were evaluated together. These segments are recovering from channelization due to historic agricultural practices. Segment S5_S081c is the portion upstream from the existing bridge carrying SR 37 over Beanblossom Creek, S5_S081d is the bridge portion, and S5_S081e is the portion located downstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and no sinuosity where the Alternatives cross this stream. The predominant substrate consists of silt and detritus. The stream has a wide riparian corridor associated with its left bank and a moderately wide riparian buffer along its right bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5_S081c segment are on the second page of this form. All of the Alternatives possess similar impacts at this location.



Photograph Taken Upstream



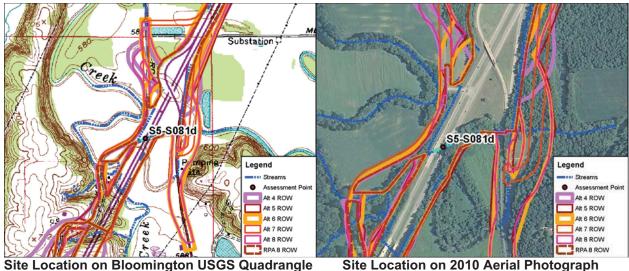
Photograph Taken Downstream

Sees S81c, d, e

Sample bloSample :	# Stream Name (Bean blossom	Creek Locat	ion SR 37 X	ing
The state of the s	ounty 1	Macro SampleType	☐ Habitat		El Score:(34)
Ku 6/39/2005			Complete	4 - 1 - 1 - 1	
1-Substrate (20 poin	its maximum)		- 12 and	Substi	rate Score: 3
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Check all that are present	P=Pool, R=	AND DESCRIPTION OF THE PERSON	are weedle	Substrate Origin	A STATE OF THE STA
Predominant Preser		The state of the s	Limestone(1)	Hardpan(0)	Lacustrine(0)
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Bldrs/Slabs(10)	Hardpan(4	A. Carrier, Street, St. Carrier, St. Carrier	Wetlands(0) Silt Cover		Coal fines(-2)
C Cabble(8)	Muck(2)	- FIRE	Silt heavy(-2)	and the second	tensive(-2)
C. Cravel(7) GE		10	Silt moderate	The state of the s	oderate(-1)
☐{ Sand(6)	☐ ☐ Sludge(1)		Silt normal(0)	C'Lo	w/Normal(0)
□ □ Bedrock(5) □ □ □	☐ ☐ Artificial(0		Silt free(1)	□ No	ne(1)
IOTE: ignore studge origination		substrates present	t(2)	Julie 2	
ources, score based on natur	ral substrates Com	ments: 2 5	2-9-5		SHE STEEL
-Instream Cover (20	0 points maximu	m		Instream C	over Score: 8
Type (check ALL that apply)			Ame	The state of the s	or 2 and AVERAGE)
Undercut banks(1)	Deep pools(2)	Oxbows(1)	*******	Extensive	
Overhanging vegetation(1)	Rootwads(1)	Aquatic macro	phytes(1)	Moderate	25-75% (7)
UShallowskin slow water)(1)	Boulders(1)	Logs and woo	dy debris(1)	Sparse 5-	25% (3)
Roomals(1) Comr	ments:			Nearly ab:	sent <5% (1)
-Channel Morpholo	gy (20) (check only	one per category, C	OR two and AVER	AGE) Cha	nnel Score:
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Moderate (3) Good (Fig. 12	The state of the s	Relocation	Islands
Low (2)			HIDDELDIG [2]	INGIGERRALI	ISIdilus
	Muscovering	(3)		Canopy Removal	Leveed
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	2027	no recovery (1)	Low (1) [Canopy Removal	Leveed Bank shaping
omments speaker o	1) Recent or r Chanally yed - V-	io recovery (1)	Low (1) [Canopy Removal Dredging One side channel	Leveed Bank shaping
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Riparian Zone & Ba	Recent or r Chanally rd - y- ank Erosion (10)	no recovery (1) yy uniform points maxin tegory, check only	Low (1) [Tum] one per bank, OF	Canopy Removal Dredging One side channel Ripa	Leveed Bank shaping modifications rian Score: 6
-Riparian Zone & Ba	Chanally (Chanally (Chanal	no recovery (1) you uniform points maxin tegory, check only lain quality (past 1) ant per bank)	Low (1) [num) one per bank, OF 00 ft Riparian)	Canopy Removal Dredging One side channel Ripa I two per bank and Bar	Leveed Bank shaping modifications rian Score: 6 AYERAGE hk Erosion R (per bank)
R (per bank) Wide >50m (4)	Chanally (Chanally (Chanal	no recovery (1) you uniform points maxin tegory, check only lain quality (past 1) ant per bank)	Low (1) [num) one per bank, OF 00 ft Riparian)	Canopy Removal Dredging One side channel Ripa I two per bank and Bar	Leveed Bank shaping modifications rian Score: 6. AYERAGE). nk Erosion R (per bank) None or little (3)
Riparian Zone & Ba Left/Right banks looking de Riparian width L R (per bank) Wide >50m (4)	Recent or recent	no recovery (1) you uniform points maxin tegory, check only lain quality (past 1 ant per bank) [1(2)	num) one per bank, OF 00 ft Riparian) R Conservation	Canopy Removal Dredging One side channel Ripa I two per bank and Bar L Tillage (1)	Leveed Bank shaping modifications rian Score: 6. AYERAGE) nk Erosion R (per bank) None or little (3) Moderate (2)
Riparian Zone & Ba LefuRight tunks looking de Riparian width R (per bank) Wide >50m (4) Negrow 5-10m (2)	Recent or r Chanalh y V ank Erosion (10 cownstream (For each ca Eroslon/Runoff-Floodp L R (most predomina M Forest, Swamp (3 Shrub or Old field Residential, Park,	points maxin tegory, check only lain quality (past 1) ant per bank) [1(2) New field (1)	num) one per bank, OF 00 ft Riparian) R Urban or Ind Mining, Cons	Canopy Removal Dredging One side channel Ripa I two per bank and Bar L n Tillage (1)	Leveed Bank shaping modifications rian Score: 6. AYERAGE). nk Erosion R (per bank) None or little (3)
Riparian Zone & Ba Left/Right tranks looking de Riparian width R (cer bank) Wide > 50m (4) Westerne to -50m (3) Namew 5-10m (2) Very namew < 5m (1)	Recent or recent	points maxin tegory, check only lain quality (past 1) ant per bank) [1(2) New field (1)	num) one per bank, OF 00 ft Riparian) R Conservation	Canopy Removal Dredging One side channel Ripa I two per bank and Bar L n Tillage (1)	Leveed Bank shaping modifications rian Score: 6 AYERAGE) nk Erosion R (per bank) None or little (3) Moderate (2)
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Sample # bioSam		e manifeliar et anomanion concessore	Location L		
Surveyor Sample Date	County		eek 57 mm	C SR37	
Sample Date	Marroe	Macro San	Population Property Complete	QHEI Sco	re:
Impacts/Miscella	CALL AND SHARES				
Major Suspected Imp	acts (Check all that a	apply)	Miscellaneous	QHEI Information	
☐ None ☐ Industrial ☐ WWTP ☐ Agricultural ☐ Livestock ☐ Silv culture	☐ Suburban ☐ Channelization ☐ Riparian Remo ☐ Flow Alteration ☐ CSOs ☐ Mining	val Ae	sthetic rating (1-10): 3 % py Cover (% Open): 20 % al QHEI Notes:	Riffle: 5 is reach rep 6 Run: 80 of stream? Glide: 15	yes
☐ Construction	Landfills	Ver	y homogeneous S	ubstrate t morp	notory
☐ Orban Runoff Pollution Impact Comme	Natural		The second second		
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Site Location on 2010 Aerial Photograph

Aquatic Resource: Stream **USGS Quadrangle:** Bloomington

Stream Name: Beanblossom Creek Section: Quarter: NE Township: T9N Range: R1W IDEM 303(d) List: Yes Watershed: 05120202010 OHWM Width: 64.0 feet

Channelized: OHWM Depth: 16.0 feet Yes **USCOE** Jurisdiction: **Stream Type:** Perennial Yes **Evaluation Type:** QHEI **IDEM Jurisdiction:** Yes Watershed Area:

Evaluation Score: 34.75 42.73 sq mi Legal Drain (Y/N): Ν **Predominant Sub:** Silt/detritus

UTME: 1770143 ft UTMN: 14247299 ft

Stream S5_S081d – Modified Warm Water Habitat						
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)			
4	207	0.25	0.26			
5	207	0.25	0.26			
6	207	0.25	0.26			
7	207	0.25	0.26			
8	207	0.25	0.26			
RPA 8	207	0.25	0.26			

Description of Potential Impact:

Impacts to S5 S081d at this location for the Alternatives are listed in the table above. Segments S5 S081c, S5 S081d, and S5 S081e were evaluated together. These segments are recovering from channelization due to historic agricultural practices. Segment S5 S081c is the portion upstream from the existing bridge carrying SR 37 over Beanblossom Creek, S5 S081d is the bridge portion, and S5 S081e is the portion located downstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and no sinuosity where the Alternatives cross this stream. The predominant substrate consists of silt and detritus. The stream has a wide riparian corridor associated with its left bank and a moderately wide riparian buffer along its right bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5 S081c segment are on the second page of this form. All of the Alternatives possess similar impacts at this location.



Photograph Taken Upstream



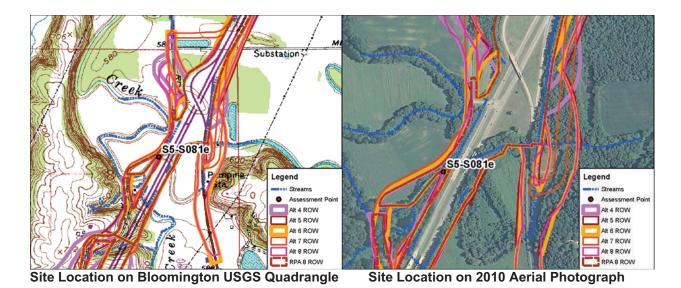
Photograph Taken Downstream

Sees S81c, d, e

Sample bloSample :	# Stream Name (Bean blossom	Creek Locat	ion SR 37 X	ing
The state of the s	ounty 1	Macro SampleType	☐ Habitat		El Score:(34)
Ku 6/39/2005			Complete	4 - 1 - 1 - 1	
1-Substrate (20 poin	its maximum)		- 12 and	Substi	rate Score: 3
Chack 1 Predominant Po	ool & 1 Predominant Riffi	le Sub	strate Quality (che	eck only 1, or check	(2 and AVERAGE)
Check all that are present	P=Pool, R=	AND DESCRIPTION OF THE PERSON	are wells	Substrate Origin	A STATE OF THE STA
Predominant Preser		The state of the s	Limestone(1)	Hardpan(0)	Lacustrine(0)
P R	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Tills(1)	Sandstone(0)	Shale(-1)
Bldrs/Slabs(10)	Hardpan(4	A. Carrier, Street, St. Carrier, St. Carrier	Wetlands(0) Silt Cover		Coal fines(-2)
C Cabble(8)	Muck(2)	- FIRE	Silt heavy(-2)	and the second	tensive(-2)
C. Cravel(7) GE		10	Silt moderate	The state of the s	oderate(-1)
☐{ Sand(6)	☐ ☐ Sludge(1)		Silt normal(0)	C'Lo	w/Normal(0)
□ □ Bedrock(5) □ □ □	☐ ☐ Artificial(0		Silt free(1)	□ No	ne(1)
IOTE: ignore studge origination		substrates present	t(2)	Julie 2	
ources, score based on natur	ral substrates Com	ments: 2 5	2-9-5		SHE STEEL
-Instream Cover (20	0 points maximu	m		Instream C	over Score: 8
Type (check ALL that apply)			Ame	The state of the s	or 2 and AVERAGE)
Undercut banks(1)	Deep pools(2)	Oxbows(1)	*******	Extensive	
Overhanging vegetation(1)	Rootwads(1)	Aquatic macro	phytes(1)	Moderate	25-75% (7)
UShallowskin slow water)(1)	Boulders(1)	Logs and woo	dy debris(1)	Sparse 5-	25% (3)
Roomals(1) Comr	ments:			Nearly ab:	sent <5% (1)
-Channel Morpholo	gy (20) (check only	one per category, C	OR two and AVER	AGE) Cha	nnel Score:
Sinus Ity Developm				Iodifications/Other	1
High (4) Excelle				Snagging	Impound
Moderate (3) Good (Fig. 12	The state of the s	Relocation	Islands
Low (2)			HIDDELDIG [2]	INGIGERRALI	ISIdilus
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Sample # bioSam		e manifeliar et anomerous consciones	Location L		
Surveyor Sample Date	County		eek 57 mm	C SR37	
Sample Date	Marroe	Macro San	Population Property Complete	QHEI Sco	re:
Impacts/Miscella	CALL AND SHARES				
Major Suspected Imp	acts (Check all that a	apply)	Miscellaneous	QHEI Information	
☐ None ☐ Industrial ☐ WWTP ☐ Agricultural ☐ Livestock ☐ Silv culture	☐ Suburban ☐ Channelization ☐ Riparian Remo ☐ Flow Alteration ☐ CSOs ☐ Mining	val Ae	sthetic rating (1-10): 3 % py Cover (% Open): 20 % al QHEI Notes:	Riffle: 5 is reach rep 6 Run: 80 of stream? Glide: 15	yes
Construction	Landfills	Ver	y homogeneous S	ubstrate t morp	notory
☐ Orban Runoff Pollution Impact Comme	Natural		The second second		
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Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Beanblossom Creek Section: 8

Quarter: NE Township: T9N Range: R1W IDEM 303(d) List: Yes Watershed: 05120202010 OHWM Width: 64.0 feet Channelized: OHWM Depth: 16.0 feet Yes

Stream Type: Perennial USCOE Jurisdiction: Yes
Evaluation Type: QHEI IDEM Jurisdiction: Yes
Evaluation Score: 34.75 Watershed Area: 42.7

Evaluation Score: 34.75 **Watershed Area:** 42.73 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Silt/detritus

UTME: 1770143 ft **UTMN**: 14247299 ft

Stream S5_S081e – Modified Warm Water Habitat							
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)				
4	539	0.64	0.92				
5	559	0.67	0.93				
6	444	0.53	0.71				
7	437	0.52	0.69				
8	569	0.68	0.88				
RPA 8	453	0.54	0.71				

Description of Potential Impact:

Impacts to S5_S081e at this location for the Alternatives are listed in the table above. Segments S5_S081c, S5_S081d, and S5_S081e were evaluated together. These segments are recovering from channelization due to historic agricultural practices. Segment S5_S081c is the portion upstream from the existing bridge carrying SR 37 over Beanblossom Creek, S5_S081d is the bridge portion, and S5_S081e is the portion located downstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and no sinuosity where the Alternatives cross this stream. The predominant substrate consists of silt and detritus. The stream has a wide riparian corridor associated with its left bank and a moderately wide riparian buffer along its right bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5_S081c segment are on the second page of this form. All of the Alternatives possess similar impacts at this location.



Photograph Taken Upstream



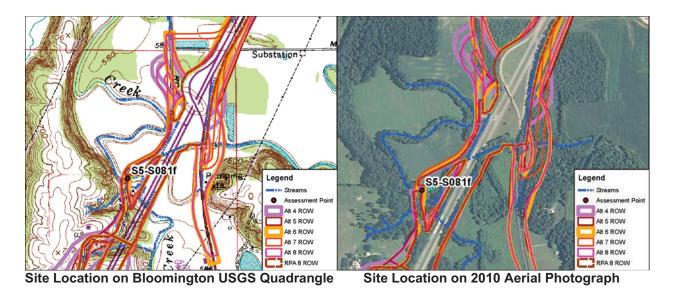
Photograph Taken Downstream

Sees S81c, d, e

Sample bloSample :	# Stream Name (Bean blossom	Creek Locat	ion SR 37 X	ing
The state of the s	ounty 1	Macro SampleType	☐ Habitat		El Score:(34)
Ku 6/39/2005			Complete	4 - 1 - 1 - 1	
1-Substrate (20 poin	its maximum)		- 12 and	Substi	rate Score: 3
Chack 1 Predominant Po	ool & 1 Predominant Riffi	le Sub	strate Quality (che	eck only 1, or check	(2 and AVERAGE)
Check all that are present	P=Pool, R=	AND DESCRIPTION OF THE PERSON	are wells	Substrate Origin	A STATE OF THE STA
Predominant Preser		The state of the s	Limestone(1)	Hardpan(0)	Lacustrine(0)
P R	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Tills(1)	Sandstone(0)	Shale(-1)
Bldrs/Slabs(10)	Hardpan(4	A. Carrier, Street, St. Carrier, St. Carrier	Wetlands(0) Silt Cover		Coal fines(-2)
C Cabble(8)	Muck(2)	- FIRE	Silt heavy(-2)	and the second	tensive(-2)
C. Cravel(7) GE		10	Silt moderate	The state of the s	oderate(-1)
☐{ Sand(6)	☐ ☐ Sludge(1)		Silt normal(0)	C'Lo	w/Normal(0)
□ □ Bedrock(5) □ □ □	☐ ☐ Artificial(0		Silt free(1)	□ No	ne(1)
IOTE: ignore studge origination		substrates present	t(2)	Julie 2	
ources, score based on natur	ral substrates Com	ments: 2 5	2-9-5		SHE STEEL
-Instream Cover (20	0 points maximu	m		Instream C	over Score: 8
Type (check ALL that apply)			Ame	The state of the s	or 2 and AVERAGE)
Undercut banks(1)	Deep pools(2)	Oxbows(1)	*******	Extensive	
Overhanging vegetation(1)	Rootwads(1)	Aquatic macro	phytes(1)	Moderate	25-75% (7)
UShallowskin slow water)(1)	Boulders(1)	Logs and woo	dy debris(1)	Sparse 5-	25% (3)
Roomals(1) Comr	ments:			Nearly ab:	sent <5% (1)
-Channel Morpholo	gy (20) (check only	one per category, C	OR two and AVER	AGE) Cha	nnel Score:
Sinus Ity Developm				Iodifications/Other	1
High (4) Excelle				Snagging	Impound
Moderate (3) Good (Fig. 12	The state of the s	Relocation	Islands
Low (2)			HIDDELDIG [2]	INGIGERRALI	ISIdilus
	Muscovering	(3)		Canopy Removal	Leveed
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	2027	no recovery (1)	Low (1) [Canopy Removal	Leveed Bank shaping
omments speaker o	1) Recent or r Chanally yed - V-	io recovery (1)	Low (1) [Canopy Removal Dredging One side channel	Leveed Bank shaping
-Riparian Zone & Ba	Recent or r Chanally rd - y- ank Erosion (10)	no recovery (1) my uniform points maxin	Low (1) [Canopy Removal Dredging One side channel	Leveed Bank shaping modifications rian Score: 6
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Sample Date	Marroe	Macro San	Population Property Complete	QHEI Sco	re:
Impacts/Miscella	CALL AND SHARES				
Major Suspected Imp	acts (Check all that a	apply)	Miscellaneous	QHEI Information	
☐ None ☐ Industrial ☐ WWTP ☐ Agricultural ☐ Livestock ☐ Silv culture	☐ Suburban ☐ Channelization ☐ Riparian Remo ☐ Flow Alteration ☐ CSOs ☐ Mining	val Ae	sthetic rating (1-10): 3 % py Cover (% Open): 20 % al QHEI Notes:	Riffle: 5 is reach rep 6 Run: 80 of stream? Glide: 15	yes
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Aquatic Resource:StreamUSGS Quadrangle:BloomingtonStream Name:Beanblossom CreekSection:8

Beanblossom Creek Section: 8 Quarter: NE Township: T9N Range: R1W IDEM 303(d) List: Yes Watershed: 05120202010 OHWM Width: 45.0 feet Channelized: **OHWM Depth:** 18.5 feet No

Stream Type: Perennial USCOE Jurisdiction: Yes
Evaluation Type: QHEI IDEM Jurisdiction: Yes

Evaluation Score: 48 **Watershed Area:** 42.73 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Hardpan

UTME: 1768864 ft **UTMN**: 14246629 ft

	Stream S5-S0	81f – Warm Water Habitat	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	59	0.06	0.51
5	67	0.07	0.47
6	162	0.17	0.62
7	128	0.13	0.51
8	67	0.07	0.44
RPA 8	67	0.07	0.41

Description of Potential Impact:

Impacts to S5-S081f at this location for the Alternatives are listed in the table above. Segment S5-S081f is the portion from the mouth of Griffy Creek to the North Kinser Pike bridge, while segment S5-S081g is the North Kinser Road bridged portion and S5-S081g is located downstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and moderate sinuosity where the Alternatives cross this stream. Hardpan is the predominant substrate. The stream has a wide riparian corridor associated with its left bank and a moderately wide riparian buffer along its right bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5-S081f segment are on the second page of this form. Implementation of RPA 8 will decrease the amount of impacts at this location.



Photograph Taken Upstream



Photograph Taken Downstream

IDEM	Sample #	WQ Biologic	bioSample #	Stream Name	itat Evalua	Location	
-	5819	ah	alocaling is	Beanblosson	n Kreek		
1	Surveyor	Sample Date	County	Macro Sample Type	Habitat	OUET C	[HO]
No.	KSS	4/24/12	Monroe		Complete	QHEI Score:	48
-		estimate % and o	edominant substrate theck every type pre-	sent	ALL PERSONS OF THE PROPERTY OF THE PARTY OF	Or 2 & average)	
PREDOMIN	BEST TYPES	PRESENT TOTAL %	PREDOMINANT	PRESENT TOTAL %	IGIN	QUALITY	
	LDR/SLABS [10 OULDER [9] OBBLE [8] RAVEL [7] AND [6] EDROCK [5] ER OF BEST	TYPES: 4 or	more [2] sludge fro	I]	ÄNDS [0] PAN [0] STONE [0] AP [0] TRINE [0] :[-1]	MODERATE [-1] MODERATE [-1] MORMAL [0] FREE [1] EXTENSIVE [-2] MODERATE [-1] MODERATE [-1] MORMAL [0] MONE [1]	Substrate Maximum
Comm	ents	⊠ 3 or	ess [0]	LI COAL	FINES [-2]	NONE [1]	20
quality; quality in that is s % Amou	2-Moderate amon moderate or g table, well devel nt UNDERCUT BA OVERHANGIN	ounts, but not of hi reater amounts (e. loped root wad in c NKS [1] G VEGETATION [1] N SLOW WATER) [ghest quality or in si g., very large boulde leep/fast water, or d Amount 20 2 POOLS> 5 1 ROOTW	ADS[1]AQUATICN	; 3 -Highest diameter log	Check ONE (Or 2 & EXTENSIVE > 75 MODERATE 25- SPARSE 5 - < 25 NEARLY ABSENT	average) 5% [11] 75% [7] % [3] [< 5% [1] er
Comn	nents					2	0
SINU HIG MOI	OSITY H[4] DERATE[3] V[2] NE[1]	RPHOLOGY CH DEVELO DEVELO GOOD[FAIR[3	PMENT (PENT[7] ST	RECOVERED[4] RECOVERING[3]	☐ LOW	H[3] DERATE[2] Chanr /[1] Maximu	200
41 BA	NK EROSIO	N AND RIPAR	RIAN ZONE Chec	k ONE in each category for EAC	CH BANK (Or 2 p	er bank & average)	
Rive	r right looking downs EROSION IONE/LITTLE [3 IODERATE [2]	stream L R RIPA	ARIAN WIDTH > 50m[4] RATE 10-50m[3] OW 5-10m[2] NARROW[1] [0]	L R FLOOD PLAIN QU. CONTROL PORTON PASTURE [1] COPEN PASTURE, ROWC	ALITY [2] [EW FIELD [1] [Indica	L R CONSERVATION TII URBAN OR INDUSTI URBAN OR INDUSTI MINING / CONSTRU te predominant land use(s) 00m riparian. Riparia Maximu	RIAL[0] ICTION[0]
Comn	Transfer of the Control						10
Check	IMUM DEPT ONE (ONLY!) ·1m[6] I.7-<1m[4] I.4-<0.7m[2] I.2-<0.4m[1] :0.2m[0]	Check ONE POOLWI	RUN QUALITY NEL WIDTH (Or 2 & average) DTH > RIFFLE WIDTH DTH = RIFFLE WIDTH OTH < RIFFLE WIDTH	TH[1] UVERY FAST[1] TH[0] FAST[1] MODERATE[1]	at apply	TENT [-2] Pool Currer	ment on back) ontact contact
of rif RIFFI BES BES BES Comm	ate for functional fle-obligate special temperature of the control	RUN D m[2] MAXII m[1] MAXII m [2] MAXII m [3] MAXII	EPTH R MUM > 50cm [2] UMUM < 50cm [1] UMUM < 5	UNSTABLE (e.g., Fine Gravel, OW [2-4] %POOL: [r)[2] avel)[1]	MODERATE [0] Ru EXTENSIVE [-1] Maximu DE: Gradien	NESS
DR	AINAGE AR	REA (12,4 mi2)	MODERATE [6		70 %RIF	FLE: Maximu	0 6

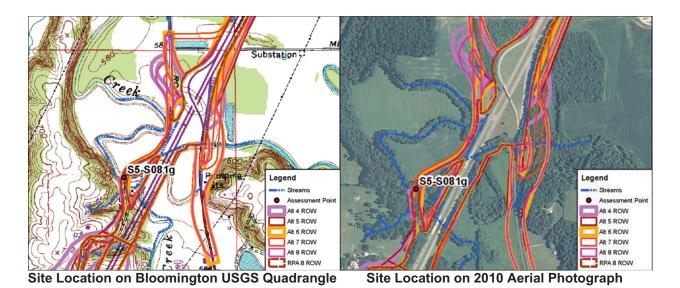
OHW 45' × 18,5'

DEM 07/06/10

SSIFFA, OWQ Biological Studies QHEI (Qualitative Habitat Evaluation Index) Stream Name Location Sample # bioSample # Beanblossom Sample Date County Macro SampleType N Habitat QHEI Score Complete Impacts/Miscellaneous Major Suspected Impacts (Check all that apply) Miscellaneous QHEI Information None Suburban Subjective rating (1-10): % Riffle: is reach representative of stream? Industrial Channelization % Run: 10 Aesthetic rating (1-10): □ wwTP Riparian Removal % Glide: Agricultural Flow Alteration Canopy Cover (% Open): 45 % Pool: 3() Livestock CSOs General QHEI Notes Silviculture Mining Landfills Construction Natural Urban Runoff **Pollution Impact Comments:**

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Ph 37 - UP 38 - dcwh 39 LF 40 RF



Aquatic Resource:StreamUSGS Quadrangle:BloomingtonStream Name:Beanblossom CreekSection:8

Quarter: NE Township: T9N Range: R1W IDEM 303(d) List: Yes Watershed: 05120202010 OHWM Width: 45.0 feet Channelized: **OHWM Depth:** 18.5 feet No

Stream Type: Perennial USCOE Jurisdiction: Yes
Evaluation Type: QHEI IDEM Jurisdiction: Yes
Evaluation Score: 48 Watershed Area: 42.73

Evaluation Score: 48 **Watershed Area:** 42.73 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Hardpan

UTME: 1768864 ft **UTMN**: 14246629 ft

	Stream S5-S08	81g – Warm Water Habitat	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	0	0.00	0.01
5	0	0.00	0.01
6	33	0.03	0.01
7	33	0.03	0.02
8	0	0.00	0.01
RPA 8	0	0.00	0.01

Description of Potential Impact:

Impacts to S5-S081g at this location for the Alternatives are listed in the table above. Segment S5-S081f is the portion from the mouth of Griffy Creek to the North Kinser Pike bridge, while segment S5-S081g is the North Kinser Road bridged portion and S5-S081g is located downstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and moderate sinuosity where the Alternatives cross this stream. Hardpan is the predominant substrate. The stream has a wide riparian corridor associated with its left bank and a moderately wide riparian buffer along its right bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5-S081f segment are on the second page of this form. Implementation of Alternative 6 or Alternative 7 will decrease the amount of impacts at this location.



Photograph Taken Upstream



Photograph Taken Downstream

IDEM	Sample #	WQ Biologic	bioSample #	Stream Name	itat Evalua	Location	
-	5819	ah	alocaling is	Beanblosson	n Kreek		
1	Surveyor	Sample Date	County	Macro Sample Type	Habitat	OUET C	[HO]
No.	KSS	4/24/12	Monroe		Complete	QHEI Score:	48
-		estimate % and o	edominant substrate theck every type pre-	sent	ALL PERSONS OF THE PROPERTY OF THE PARTY OF	Or 2 & average)	
PREDOMIN	BEST TYPES	PRESENT TOTAL %	PREDOMINANT	PRESENT TOTAL %	IGIN	QUALITY	
	LDR/SLABS [10 OULDER [9] OBBLE [8] RAVEL [7] AND [6] EDROCK [5] ER OF BEST	TYPES: 4 or	more [2] sludge fro	I]	ÄNDS [0] PAN [0] STONE [0] AP [0] TRINE [0] :[-1]	MODERATE [-1] MODERATE [-1] MORMAL [0] FREE [1] EXTENSIVE [-2] MODERATE [-1] MODERATE [-1] MORMAL [0] MONE [1]	Substrate Maximum
Comm	ents	⊠ 3 or	ess [0]	LI COAL	FINES [-2]	NONE [1]	20
quality; quality in that is s % Amou	2-Moderate amon moderate or g table, well devel nt UNDERCUT BA OVERHANGIN	ounts, but not of hi reater amounts (e. loped root wad in c NKS [1] G VEGETATION [1] N SLOW WATER) [ghest quality or in si g., very large boulde leep/fast water, or d Amount 20 2 POOLS> 5 1 ROOTW	ADS[1]AQUATICN	; 3 -Highest diameter log	Check ONE (Or 2 & EXTENSIVE > 75 MODERATE 25- SPARSE 5 - < 25 NEARLY ABSENT	average) 5% [11] 75% [7] % [3] [< 5% [1] er
Comn	nents					2	0
SINU HIG MOI	OSITY H[4] DERATE[3] V[2] NE[1]	RPHOLOGY CH DEVELO DEVELO GOOD[FAIR[3	PMENT (PENT[7] ST	RECOVERED[4] RECOVERING[3]	☐ LOW	H[3] DERATE[2] Chanr /[1] Maximu	200
41 BA	NK EROSIO	N AND RIPAR	RIAN ZONE Chec	k ONE in each category for EAC	CH BANK (Or 2 p	er bank & average)	
Rive	r right looking downs EROSION IONE/LITTLE [3 IODERATE [2]	stream L R RIPA	ARIAN WIDTH > 50m[4] RATE 10-50m[3] OW 5-10m[2] NARROW[1] [0]	L R FLOOD PLAIN QU. CONTROL PORTON PASTURE [1] COPEN PASTURE, ROWC	ALITY [2] [EW FIELD [1] [Indica	L R CONSERVATION TII URBAN OR INDUSTI URBAN OR INDUSTI MINING / CONSTRU te predominant land use(s) 00m riparian. Riparia Maximu	RIAL[0] ICTION[0]
Comn	Transfer of the Control						10
Check	IMUM DEPT ONE (ONLY!) ·1m[6] I.7-<1m[4] I.4-<0.7m[2] I.2-<0.4m[1] :0.2m[0]	Check ONE POOLWI	RUN QUALITY NEL WIDTH (Or 2 & average) DTH > RIFFLE WIDTH DTH = RIFFLE WIDTH OTH < RIFFLE WIDTH	TH[1] UVERY FAST[1] TH[0] FAST[1] MODERATE[1]	at apply	TENT [-2] Pool Currer	ment on back) ontact contact
of rif RIFFI BES BES BES Comm	ate for functional fle-obligate special temperature of the control	RUN D m[2] MAXII m[1] MAXII m [2] MAXII m [3] MAXII	EPTH R MUM > 50cm [2] UMUM < 50cm [1] UMUM < 5	UNSTABLE (e.g., Fine Gravel, OW [2-4] %POOL: [r)[2] avel)[1]	MODERATE [0] Ru EXTENSIVE [-1] Maximu DE: Gradien	NESS
DR	AINAGE AR	REA (12,4 mi2)	MODERATE [6		70 %RIF	FLE: Maximu	0 6

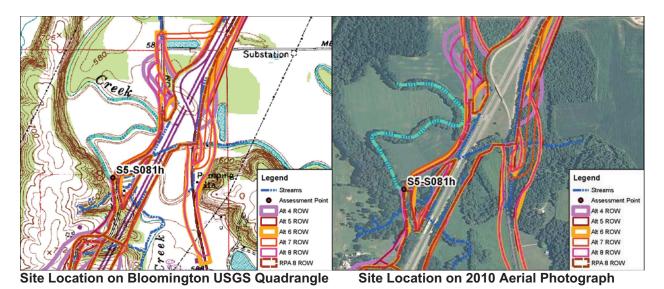
OHW 45' × 18,5'

DEM 07/06/10

SSIFFA, OWQ Biological Studies QHEI (Qualitative Habitat Evaluation Index) Stream Name Location Sample # bioSample # Beanblossom Sample Date County Macro SampleType N Habitat QHEI Score Complete Impacts/Miscellaneous Major Suspected Impacts (Check all that apply) Miscellaneous QHEI Information None Suburban Subjective rating (1-10): % Riffle: is reach representative of stream? Industrial Channelization % Run: 10 Aesthetic rating (1-10): □ wwTP Riparian Removal % Glide: Agricultural Flow Alteration Canopy Cover (% Open): 45 % Pool: 3() Livestock CSOs General QHEI Notes Silviculture Mining Landfills Construction Natural Urban Runoff **Pollution Impact Comments:**

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Ph 37 - UP 38 - dcwh 39 LF 40 RF



Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Beanblossom Creek Section: 8 Quarter: NE Township: T9N Range: R1W IDEM 303(d) List: Yes Watershed: 05120202010 OHWM Width: 45.0 feet 18.5 feet

Channelized:NoOHWM Depth:18.5 feeStream Type:PerennialUSCOE Jurisdiction:YesEvaluation Type:QHEIIDEM Jurisdiction:Yes

Evaluation Score: 48 **Watershed Area:** 42.73 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Hardpan

UTME: 1768864 ft **UTMN**: 14246629 ft

	Stream S5-S08	31h – Warm Water Habitat	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	0	0.00	0.20
5	0	0.00	0.26
6	13	0.01	0.40
7	45	0.05	0.47
8	0	0.00	0.19
RPA 8	0	0.00	0.09

Description of Potential Impact:

Impacts to S5-S081h at this location for the Alternatives are listed in the table above. Segment S5-S081f is the portion from the mouth of Griffy Creek to the North Kinser Pike bridge, while segment S5-S081g is the North Kinser Road bridged portion and S5-S081g is located downstream from the bridge. At the time of evaluation, this stream is a perennial stream with poor habitat development and moderate sinuosity where the Alternatives cross this stream. Hardpan is the predominant substrate. The stream has a wide riparian corridor associated with its left bank and a moderately wide riparian buffer along its right bank. The adjacent floodplain is dominated by forest land. Photographs taken upstream and downstream at the S5-S081f segment are on the second page of this form. Implementation of Alternative 6 will decrease the amount of impacts at this location.



Photograph Taken Upstream



Photograph Taken Downstream

IDEM	Sample #	WQ Biologic	bioSample #	Stream Name	itat Evalua	Location	
-	5819	ah	alocaling is	Beanblosson	n Kreek		
1	Surveyor	Sample Date	County	Macro Sample Type	Habitat	OUET C	[HO]
No.	KSS	4/24/12	Monroe		Complete	QHEI Score:	48
-		estimate % and o	edominant substrate theck every type pre-	sent	ALL PERSONS OF THE PROPERTY OF THE PARTY OF	Or 2 & average)	
PREDOMIN	BEST TYPES	PRESENT TOTAL %	PREDOMINANT	PRESENT TOTAL %	IGIN	QUALITY	
	LDR/SLABS [10 OULDER [9] OBBLE [8] RAVEL [7] AND [6] EDROCK [5] ER OF BEST	TYPES: 4 or	more [2] sludge fro	I]	ÄNDS [0] PAN [0] STONE [0] AP [0] TRINE [0] :[-1]	MODERATE [-1] MODERATE [-1] MORMAL [0] FREE [1] EXTENSIVE [-2] MODERATE [-1] MODERATE [-1] MORMAL [0] MONE [1]	Substrate Maximum
Comm	ents	⊠ 3 or	ess [0]	LI COAL	FINES [-2]	NONE [1]	20
quality; quality in that is s % Amou	2-Moderate amon moderate or g table, well devel nt UNDERCUT BA OVERHANGIN	ounts, but not of hi reater amounts (e. loped root wad in c NKS [1] G VEGETATION [1] N SLOW WATER) [ghest quality or in si g., very large boulde leep/fast water, or d Amount 20 2 POOLS> 5 1 ROOTW	ADS[1]AQUATICN	; 3 -Highest diameter log	Check ONE (Or 2 & EXTENSIVE > 75 MODERATE 25- SPARSE 5 - < 25 NEARLY ABSENT	average) 5% [11] 75% [7] % [3] [< 5% [1] er
Comn	nents					2	0
SINU HIG MOI	OSITY H[4] DERATE[3] V[2] NE[1]	RPHOLOGY CH DEVELO DEVELO GOOD[FAIR[3	PMENT (PENT[7] ST	RECOVERED[4] RECOVERING[3]	☐ LOW	H[3] DERATE[2] Chanr /[1] Maximu	200
41 BA	NK EROSIO	N AND RIPAR	RIAN ZONE Chec	k ONE in each category for EAC	CH BANK (Or 2 p	er bank & average)	
Rive	r right looking downs EROSION IONE/LITTLE [3 IODERATE [2]	stream L R RIPA	ARIAN WIDTH > 50m[4] RATE 10-50m[3] OW 5-10m[2] NARROW[1] [0]	L R FLOOD PLAIN QU. CONTROL PORTON PASTURE [1] COPEN PASTURE, ROWC	ALITY [2] [EW FIELD [1] [Indica	L R CONSERVATION TII URBAN OR INDUSTI URBAN OR INDUSTI MINING / CONSTRU te predominant land use(s) 00m riparian. Riparia Maximu	RIAL[0] ICTION[0]
Comn	Transfer of the Control						10
Check	IMUM DEPT ONE (ONLY!) ·1m[6] I.7-<1m[4] I.4-<0.7m[2] I.2-<0.4m[1] :0.2m[0]	Check ONE POOLWI	RUN QUALITY NEL WIDTH (Or 2 & average) DTH > RIFFLE WIDTH DTH = RIFFLE WIDTH OTH < RIFFLE WIDTH	TH[1] UVERY FAST[1] TH[0] FAST[1] MODERATE[1]	at apply	TENT [-2] Pool Currer	ment on back) ontact contact
of rif RIFFI BES BES BES Comm	ate for functional fle-obligate special temperature of the control	RUN D m[2] MAXII m[1] MAXII m [2] MAXII m [3] MAXII	EPTH R MUM > 50cm [2] UMUM < 50cm [1] UMUM < 5	UNSTABLE (e.g., Fine Gravel, OW [2-4] %POOL: [r)[2] avel)[1]	MODERATE [0] Ru EXTENSIVE [-1] Maximu DE: Gradien	NESS
DR	AINAGE AR	REA (12,4 mi2)	MODERATE [6		70 %RIF	FLE: Maximu	0 6

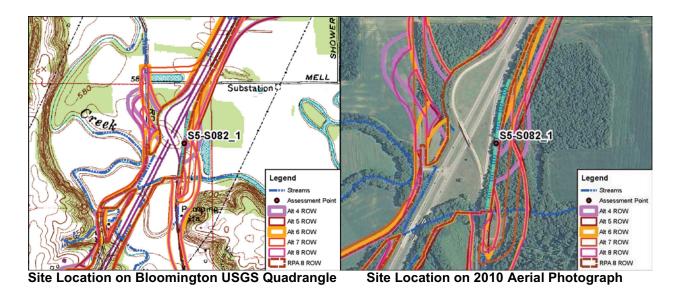
OHW 45' × 18,5'

DEM 07/06/10

SSIFFA, OWQ Biological Studies QHEI (Qualitative Habitat Evaluation Index) Stream Name Location Sample # bioSample # Beanblossom Sample Date County Macro SampleType N Habitat QHEI Score Complete Impacts/Miscellaneous Major Suspected Impacts (Check all that apply) Miscellaneous QHEI Information None Suburban Subjective rating (1-10): % Riffle: is reach representative of stream? Industrial Channelization % Run: 10 Aesthetic rating (1-10): □ wwTP Riparian Removal % Glide: Agricultural Flow Alteration Canopy Cover (% Open): 45 % Pool: 3() Livestock CSOs General QHEI Notes Silviculture Mining Landfills Construction Natural Urban Runoff **Pollution Impact Comments:**

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Ph 37 - UP 38 - dcwh 39 LF 40 RF



Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: ΝE Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 **OHWM Width:** 4.0 feet Channelized/Type: Yes/Roadside Ditch **OHWM Depth:** 0.6 feet Stream Type: **USCOE** Jurisdiction: **Ephemeral** No **Evaluation Type:** HHEI **IDEM Jurisdiction:** No

Evaluation Score: 46 **Watershed Area:** 0.02 sq mi **Legal Drain (Y/N):** N **Predominant Sub:** Muck

UTME: 1770608 ft **UTMN**: 14248033 ft

	Stream S5-S082	_1 – Modified Class II PHWF	l
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	1400	0.13	1.75
5	1404	0.13	2.65
6	1404	0.13	2.23
7	1399	0.13	1.18
8	1404	0.13	2.65
RPA 8	1399	0.13	1.08

Description of Potential Impact:

Impacts to S5-S082_1 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located within existing INDOT ROW. Its substrate is mostly muck with some scattered leaf pack. This ditch flows directly into Beanblossom Creek. The ditch is located within existing INDOT ROW. There is a narrow riparian buffer along the right bank and a wide forested floodplain along the left bank. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S082_1 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

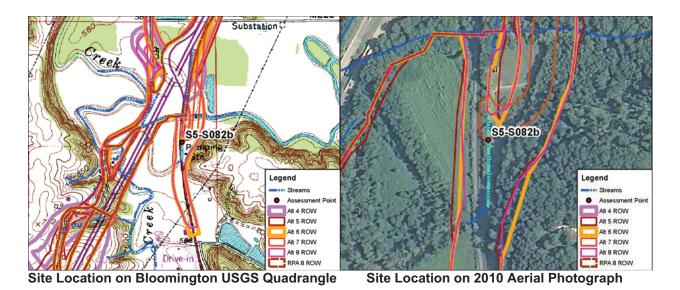


ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S082_1 RIVER BASIN White River DRAINAGE AREA (mi²)	0.02
LENGTH OF STREAM REACH (ft) 200 LAT. 39.23368 LONG. RIVER CODE RIVER MILE	
DATE 04/24/12 SCORER KSS COMMENTS (Long: -86.54021) (Roadside Ditch-Modified Cla	ss II)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] BEDROCK [16 pt] D'A DELAT FACTOWOOD F BEDRIC [5 pts] 0%	Substrate Max = 40
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0% 0% MUCK [0 pts] 60%	Wax = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ 60% ☐ ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ ☐ O% ☐ ☐ ☐ O% ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	6
Total of Percentages of Ongo, (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	""
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	25
COMMENTS MAXIMUM POOL DEPTH (centimeters): 13	
3 BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width Max=30
	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' AVERAGE BANKFULL WIDTH (meters): 1.22	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 1.22	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30 15
> 4.0 meters (> 13') [30 pts]	Width Max=30 15
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Moderate (Ephemeral)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN Forest, Wetland Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Open Pasture, Row C None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitten)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS Fenced Pasture Fenced Pasture Find Residential, Park, New Field Fenced Pasture Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral)) SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS Fenced Pasture Fenced Pasture Mining or Construction COMMENTS Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0	Width Max=30 15

Save as pdf





Aquatic Resource: Stream **USGS** Quadrangle: Bloomington Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: ΝE Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 OHWM Width: Watershed: 2.0 feet Channelized/Type: Yes/Roadside Ditch **OHWM Depth:** 0.4 feet Stream Type: **USCOE Jurisdiction:** Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 43 Watershed Area: 0.04 sq mi

Legal Drain (Y/N): N Predominant Sub: Clay

UTME: 1770475 ft **UTMN**: 14246768 ft

	Stream S5-S082	b – Modified Class II PHWH	
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	0	0.00	0.00
5	671	0.03	0.03
6	493	0.02	0.03
7	232	0.01	0.00
8	482	0.02	0.03
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S082b for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located within existing INDOT ROW. This ditch flows to S5-S082d via pipe and then into Beanblossom Creek. There is a narrow riparian corridor associated with this ditch. The floodplain consists of urban roadways on both banks. Photographs taken upstream and downstream in the area where the Alternatives cross S5-S082b are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

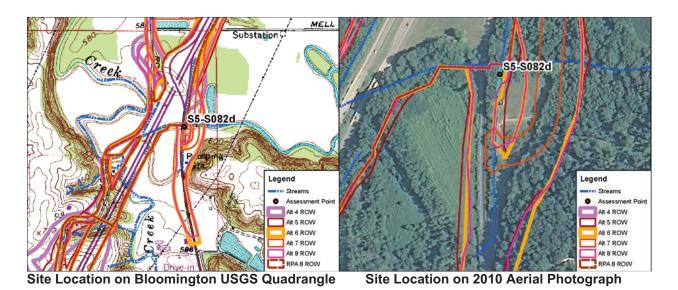
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S082b RIVER BASIN White River DRAINAGE AREA (mi²)	0.04
LENGTH OF STREAM REACH (ft) 200 LAT. 39.23021 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54071) (Roadside Ditch-Modified Cla	ss II)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 80%	Max = 40
GRAVEL (2-64 mm) [9 pts] 2% MUCK [0 pts] 0%	8
SAND (<2 mm) [6 pts]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	30
COMMENTS MAXIMUM POOL DEPTH (centimeters): 25	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] Same of the extraction of the surements (Check ONLY one box): Same of the extraction of the extra	Bankfull Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY PLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
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> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Shrub or Old V V vian or Industrial Moderate 5-10m Residential, Park, New Field Open Pasture, Row Cr None Residential, Park, New Field Mining or Construction COMMENTS Mining or Construction COMMENTS Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ↑ WOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH (MOST) ↑ WOTE: River	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7' - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7' - 13') [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Shrub or Old Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) O 1.5 m (-3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] AVERAGE BANKFULL WIDTH (meters): 0.75 AVERAGE BANKFULL WIDTH (all all all all all all all all all al	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also	o be Completed):
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Beanblossom Creek CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE E	NTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington	NRCS Soil Map Page: 18 NRCS Soil Map Stream Order
County: Monroe Town	ship / City:_ Bloomington
MISCELLANEOUS Base Flow Conditions? (Y/N): N Date of last precipitation: Photograph Information: Elevated Turbidity? (Y/N): N Canopy (% open): 95	05/12/06 Quantity: 0.39
Were samples collected for water chemistry? (Y/N): (Note la	b sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (μmhos/cm)
Additional comments/description of pollution impacts:	
ID number. Include appropriate field dat Fish Observed? (Y/N) Voucher? (Y/N) Salamanders C Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aqua Comments Regarding Biology:	er collections optional. NOTE: all voucher samples must be labeled with the site a sheets from the Primary Headwater Habitat Assessment Manual) Observed? (Y/N) Voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N) OF STREAM REACH (This must be completed):
	Form

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Reset Form

aerial photograph, and resource photographs



Aquatic Resource: Stream **USGS** Quadrangle: Bloomington Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: ΝE Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 OHWM Width: Watershed: 2.0 feet Channelized/Type: Yes/Roadside Ditch **OHWM Depth:** 0.4 feet Stream Type: **USCOE** Jurisdiction: Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 43 Watershed Area: 0.04 sq mi

Legal Drain (Y/N): N Predominant Sub: Clay

UTME: 1770505 ft **UTMN**: 14247274 ft

Stream S5-S082d – Modified Class II PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	0	0.00	0.00	
5	156	0.01	0.01	
6	156	0.01	0.01	
7	0	0.00	0.00	
8	136	0.01	0.01	
RPA 8	0	0.00	0.00	

Description of Potential Impact:

Impacts to S5-S082d for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located within existing INDOT ROW. This ditch flows directly into Beanblossom Creek. There is a narrow riparian corridor associated with this ditch. The floodplain consists of urban roadways on both banks. Photographs taken upstream and downstream in the area where the Alternatives cross S5-S082d are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



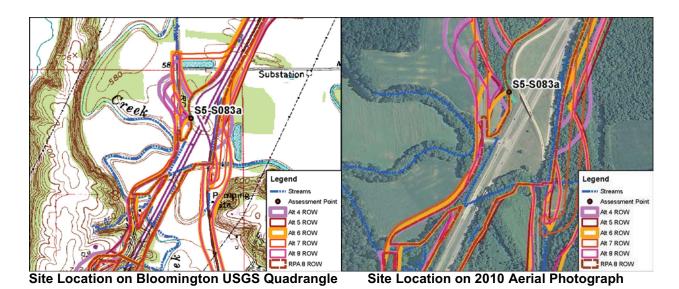
SITE NAME/LOCATION I-69 Section 5	
SITE NAME/LOCATION 1 00 000101 0 0 0 000101 0 0 0 000101 0	0.04
LENGTH OF STREAM REACH (ft) 150 LAT. 39.23159 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers COMMENTS (Long: -86.54059) (Roadside Ditch-Modified CI	ass II)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHE
□ □ BLDR SLABS [16 pts] □ ✓ SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] BEDROCK [16 pt] LEAF PACK/WOODY DEBRIS [3 pts] 5% 0% FINE DETRITUS [3 pts]	Substrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 80%	Max = 4
☐ ☐ GRAVEL (2-64 mm) [9 pts]	8
Total of Percentages of Once (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 5	~.5
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	30
COMMENTS MAXIMUM POOL DEPTH (centimeters): 25	
, , ,	
3 RANK FULL WINTH (Massured as the average of 3.4 massurements) (Check ONLY one hox):	Bankful
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' AVERAGE BANKFULL WIDTH (meters): 0.75	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Mature Forest, Wetland Conservation Tillage	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' AVERAGE BANKFULL WIDTH (meters):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermitte	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field None COMMENTS Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Moderate (Ephemeral)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7' - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7' - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Wide >10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 14' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7' - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7' - 4' 8") [20 pts] COMMENTS OHW - 2.0' / 0.4' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Wide >10m	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed)	S5-S082d :
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, A	- ttach Completed QHFI Form)
	maar complete Q.I.E. Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Beanblossom Creek	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSH	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map	Page: 18 NRCS Soil Map Stream Order
County: Monroe Township / City: Bloc	pmington
MISCELLANEOUS	
Base Flow Conditions? (Y/N): N Date of last precipitation: 05/12/06	Quantity: 0.39
Photograph Information:	
Elevated Turbidity? (Y/N):N Canopy (% open):95%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or ic	d. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:_	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections option ID number. Include appropriate field data sheets from the I	nal. NOTE: all voucher samples must be labeled with the site
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinverteb	voucher? (Y/N) vates Observed? (Y/N) voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation	and a narrative description of the stream's location

FLOW

See Stream Assessment Form S5-S082d for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NE Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 **OHWM Width:** 6.0 feet Channelized/Type: Yes/Natural **OHWM Depth:** 0.4 feet Yes Stream Type: **Ephemeral USCOE Jurisdiction: Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 30 Watershed Area: 0.02 sq mi

Legal Drain (Y/N): N Predominant Sub: Muck

UTME: 1770103 ft **UTMN**: 14248270 ft

Stream S5-S083a – Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	262	0.04	0.97	
5	262	0.04	0.96	
6	262	0.04	0.81	
7	136	0.02	0.44	
8	262	0.04	0.96	
RPA 8	136	0.02	0.44	

Description of Potential Impact:

Impacts to S5-S083a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate of S5-S083a is predominantly muck and leaf pack. There is a moderately-wide riparian corridor on both banks of the stream. The adjacent floodplain consists of agricultural land on the right and maintained INDOT ROW on the left. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S083a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



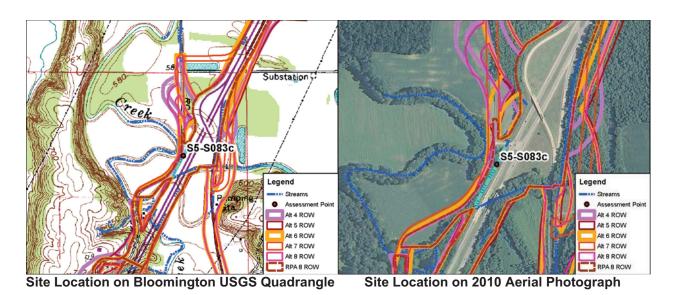
SITE NAME/LOCATION I-69 Section 5				<u> </u>	
	55-S083a RIVER E	Mhite River	DRAIN	AGE AREA (mi²)	.02
LENGTH OF STREAM REACH (ft) 200			ER CODE	RIVER MILE	
DATE 04/24/12 SCORER KSS	COMMENTS _	Long: -86.54199) (N	Natural - Class	s I)	
NOTE: Complete All Items On This For	n - Refer to "Field Ev	aluation Manual for (Ohio's PHWH S	treams" for Instr	uctions
STREAM CHANNEL NONE / NA MODIFICATIONS:	TURAL CHANNEL	RECOVERED REC	OVERING 🔲 RE	ECENT OR NO REC	OVERY
SUBSTRATE (Estimate percent of every substraction of every substraction).					HHE
(Max of 32). Add total number of signific	cant substrate types found ERCENT TYPE	d (Max of 8). Final metric	score is sum of b	PERCENT	Metri
BLDR SLABS [16 pts]	0%	SILT [3 pt]		0%	Point
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt]	0%	LEAF PACK/WOODY FINE DETRITUS [3 p		20% 0%	Substra
COBBLE (65-256 mm) [12 pts]	0%	CLAY or HARDPAN		0%	Max = 4
GRAVEL (2-64 mm) [9 pts]	0%	MUCK [0 pts]		80%	5
SAND (<2 mm) [6 pts]	0%	ARTIFICIAL [3 pts]		0%	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock).00% ^(A)	Substrate Percentage Check 10	0%	(B)	A + B
CORE OF TWO MOST PREDOMINATE SUBS	STRATE TYPES: 3	TOTAL NUMBER	R OF SUBSTRATE	TYPES: 2	
. Maximum Pool Depth (Measure the n		•		at the time of	Pool Dep
evaluation. Avoid plunge pools from roa > 30 centimeters [20 pts]	d culverts or storm water	pipes) (Check <i>ONLY</i> of the pipes) > 5 cm - 10 cm [15 p	,		Max = 3
> 22.5 - 30 cm [30 pts]	✓	< 5 cm [5 pts]	•		_
> 10 - 22.5 cm [25 pts]		NO WATER OR MO	IST CHANNEL [0	pts]	5
COMMENTS		MAXIMUM PC	OOL DEPTH (cent	imeters): 4	
BANK FULL WIDTH (Measured as the	average of 3-4 measur	ements) (Check	ONLY one box):		Bankfu
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]		> 1.0 m - 1.5 m (> 3' ≤ 1.0 m (<=3' 3") [5 p			Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		<u> </u>	10]		
COMMENTS OHW = 6'/0.4'		AVERAGE BA	NKFULL WIDTH	(meters): 1.83	20
				` '	
		on must also be comple			
RIPARIAN ZONE AND FLOODI RIPARIAN WIDTH	FLOODPLAIN QUAL	IOTE: River Left (L) and ITY	Right (R) as lookir	ng downstream 🔀	
L R (Per Bank)		ominant per Bank)	LR.		
Wide >10m	- Immeture F	est, Wetland Forest, Shrub or Old		nservation Tillage	
Moderate 5-10m	Field			oan or Industrial	
Narrow <5m	Residential	, Park, New Field	ПП Ор	en Pasture, Row Cr	op
None COMMENTS	Fenced Pa	sture	Mir Mir	ning or Construction	
COMMENTS					_
FLOW REGIME (At Time of Eva	aluation) (Check ONLY of		el isolated nools	no flow (Intermittent)
Subsurface flow with isolated poor	ols (Interstitial)		no water (Ephem	•	,
COMMENTS_					L
SINUOSITY (Number of bends				3.0	
None 0.5	1.0 1.5	2.0 2.5		3.0 > 3	
STREAM GRADIENT ESTIMATE					
Flat (0.5 ft/100 ft) Flat to Moderate	Moderate (2 ft/100 f	Moderate to	Severe	Severe (10 ft/1	00 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also		5-S083a
QHEI PERFORMED? - Yes ✓ No QHEI Score	(If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S) WWH Name: Beanblossom Creek	_ Distance from Evaluated Stream _	0.41
CWH Name: _	_ Distance from Evaluated Stream _	
EWH Name:	Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EN	TIRE WATERSHED AREA. CLEARLY MARK THE SITE L	OCATION
USGS Quadrangle Name: Bloomington	NRCS Soil Map Page: NRCS Soil Map Stream	Order
County: Monroe Towns	hip / City: Bloomington	
MISCELLANEOUS		
Base Flow Conditions? (Y/N):_Y Date of last precipitation:	04/19/12 Quantity: 0.20	
Photograph Information:		
Elevated Turbidity? (Y/N): N Canopy (% open): 45%	6	
Were samples collected for water chemistry? (Y/N): (Note lab	sample no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (μmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not,	please explain:	
Additional comments/description of pollution impacts:		
BIOTIC EVALUATION		
· / - · · ·	r collections optional. NOTE: all voucher samples must be la sheets from the Primary Headwater Habitat Assessment Ma	
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders O Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquat	bserved? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology:		
		
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This must be comple	ted):
Include important landmarks and other features of interest for	site evaluation and a narrative description of the strea	m's location



See Stream Assessment Form S5-S083a for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream **USGS** Quadrangle: Bloomington **Stream Name:** Unnamed Trib Beanblossom Ck Section: Quarter: ΝE Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 OHWM Width: 3.1 feet Watershed: Channelized/Type: Yes/Roadside Ditch OHWM Depth: 1.7 feet Stream Type: **USCOE** Jurisdiction: Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 39 Watershed Area: 0.01 sq mi

Legal Drain (Y/N): N Predominant Sub: Clay

UTME: 1769859 ft **UTMN**: 14247543 ft

Stream S5-S083c – Modified Class II PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	712	0.05	0.80	
5	712	0.05	0.85	
6	712	0.05	0.83	
7	712	0.05	0.87	
8	712	0.05	0.83	
RPA 8	712	0.05	0.80	

Description of Potential Impact:

Impacts to S5-S083c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located within existing INDOT ROW. This ditch flows directly to Beanblossom Creek. There is a narrow riparian corridor associated with this ditch. The floodplain consists of urban roadways adjacent to both banks. Photographs taken upstream and downstream in the area where the Alternatives cross S5-S083c are on the second page of this form.





Photograph Taken Downstream

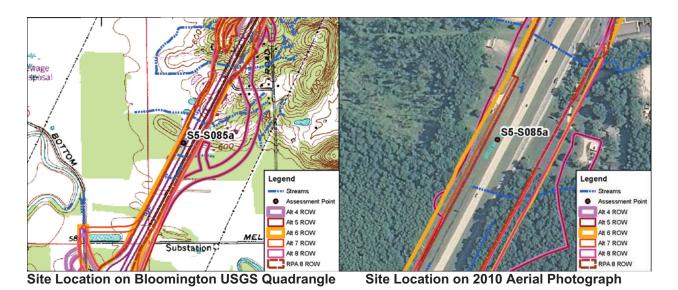


SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S083C RIVER BASIN White River DRAINAGE AREA (mi²)	.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.23234 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER J Meeker COMMENTS (Long: -86.54287) (Roadside Ditch-Modified Class	is II)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
STREAM CHANNEL	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of O 00% (A) Substrate Percentage 100% Substrate Percentage 100% Substrate Percentage 100% Substrate Percentage 100% (B)	HHEI Metric Points Substrate Max = 40
Bldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 5	A + B
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	20
COMMENTS ditch is a long pool MAXIMUM POOL DEPTH (centimeters): 45	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30
COMMENTS OHW - 3.1' / 1.7' AVERAGE BANKFULL WIDTH (meters): 0.94	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field Wide >10m Urban or Industrial	
None Residential, Park, New Field Open Pasture, Row Cro Fenced Pasture Mining or Construction COMMENTS	ιp -
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS The control of Evaluation (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral)	-
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check <i>ONLY</i> one box): None □ 1.0 □ 2.0 □ 3.0 >3 □ 1.5 □ 2.5	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/10	00 ft)

ADDITIONAL STREAM	AM INFORMATION (This Information Must Also be Completed)	<u>E</u>
QHEI PER	RFORMED? - Yes V No QHEI Score (If Yes, A	Attach Completed QHEI Form)
DOWNST	REAM DESIGNATED USE(S)	
WWH Name: Be	eanblossom Creek	_ Distance from Evaluated Stream _
CWH Name: _		_ Distance from Evaluated Stream _
EWH Name:		Distance from Evaluated Stream
	: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSH	IED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle N		
County: Monroe	Township / City: Bloc	omington
MISCELLA	ANEOUS	
Base Flow Condition		Quantity: 0.39
Photograph Informati	ion: 103 Upstream / 104 Downstream / 105 Right Bank / 106 Le	eft Bank
Elevated Turbidity? ((Y/N): Y Canopy (% open): 90%	
Were samples collec	cted for water chemistry? (Y/N): N (Note lab sample no. or ic	d. and attach results) Lab Number:
	Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach	h representative of the stream (Y/N) If not, please explain:_	
Additional comments	s/description of pollution impacts:	
BIOTIC F	VALUATION	
	N .	
Performed? (Y/N): _	(If Yes, Record all observations. Voucher collections option	nal. NOTE: all voucher samples must be labeled with the site
	ID number. Include appropriate field data sheets from the	Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N	· · ·	` '-
Frogs or Tadpoles O	` 1 ` 1 `	prates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding	g Biology:	
DRAW	ING AND NARRATIVE DESCRIPTION OF STREAM	REACH (This <u>must</u> be completed):
Include impor	tant landmarks and other features of interest for site evaluation	and a narrative description of the stream's location
•	See Stream Assessment Form	
FLOW		an
	S5-S083c for site topographic ma	_
	aerial photograph, and resource	pnotograpns

Save as pdf

Reset Form



Aquatic Resource: Stream **USGS** Quadrangle: Bloomington **Stream Name:** Unnamed Trib Beanblossom Ck Section: Quarter: SW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 1.1 feet Channelized/Type: Yes/Concrete Gutter OHWM Depth: 0.2 feet **USCOE Jurisdiction: Stream Type:** Ephemeral No **Evaluation Type: IDEM Jurisdiction:** HHEI No

Evaluation Score:12Watershed Area:0.01 sq miLegal Drain (Y/N):NPredominant Sub:Artificial

UTME: 1771882 ft **UTMN**: 14241363 ft

Stream S5-S085a – Modified Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	202	0.01	0.09	
5	202	0.01	0.11	
6	202	0.01	0.11	
7	202	0.01	0.00	
8	202	0.01	0.00	
RPA 8	202	0.01	0.00	

Description of Potential Impact:

Impacts to S5-S085a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter. There is no riparian corridor associated with this artificial drainageway. This ditch flows into an emergent wetland. The adjacent floodplain consists of maintained INDOT ROW. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S085a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S085a DRAINAGE AREA (mi²) 0.01 SITE NUMBER 200 LAT. **39.24280** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.53565) (Concrete Gutter-Modified Class I) DATE **04/25/12** KSS/DEW SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 0% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 0% 0% **Substrate** 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 400% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 0% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 0% 100% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: TOTAL NUMBER OF SUBSTRATE TYPES: 1 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 0 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 1.1'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.33 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0

■ Moderate to Severe

PHWH Form Page - 1

>3

Severe (10 ft/100 ft)

Flat (0.5 ft/100 ft)

0.5

STREAM GRADIENT ESTIMATE

✓ Flat to Moderate

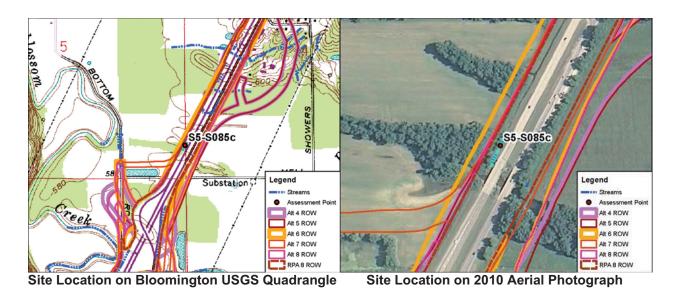
1.5

Moderate (2 ft/100 ft)

ADDITIONAL STREAM	INFORMATION (This Information Must Also	be Completed):		23 30034
QHEI PERFO	RMED? - Yes 🗸 No QHEI Score	(If Yes, Attach	Completed QHEI Forn	m)
DOWNSTREA	M DESIGNATED USE(S)			
WWH Name: Beank	· '		Distance from Evaluate	ed Stream
CWH Name: _			Distance from Evaluate	ed Stream _
EWH Name:		[Distance from Evaluate	ed Stream _
MAPPING: AT	TACH COPIES OF MAPS, INCLUDING THE EN	NTIRE WATERSHED A	REA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Nam	e: Bloomington	NRCS Soil Map Pag		Map Stream Order
County: Monroe		ship / City:Blooming	gton	
MISCELLANE	ous			
Base Flow Conditions? (Y/N): Y Date of last precipitation:	04/24/12	Quantity: 0.15	
Photograph Information:				
Elevated Turbidity? (Y/N		%		
Were samples collected	for water chemistry? (Y/N): _N (Note lat	o sample no. or id. and	d attach results) Lab Nu	umber:
		pH (S.U.)	Conductivity (μm	hos/cm)
Is the sampling reach re	presentative of the stream (Y/N)	, please explain:		
Additional comments/de	scription of pollution impacts:			
BIOTIC EVAL	HATION			
BIOTIC EVAL			10.TE	
Performed? (Y/N): _	(If Yes, Record all observations. Vouche ID number. Include appropriate field data	•		
Fish Observed? (Y/N)	Voucher? (Y/N) N Salamanders C	Observed? (Y/N) N	Voucher? (Y/N)	
Frogs or Tadpoles Obse	rved? (Y/N) Voucher? (Y/N) Aqua	tic Macroinvertebrates		Voucher? (Y/N)
Comments Regarding B	" "		, IN	, ,
commente regaranty 2				
		······································		
DRAWIN	G AND NARRATIVE DESCRIPTION	OF STREAM RE	ACH (This <u>must</u> b	pe completed):
Include important	landmarks and other features of interest fo	r site evaluation and a	a narrative description	of the stream's location
•	See Stream Assessment H	Zorm		
FLOW -				
	S5-S085a for site topog			
	aerial photograph, and	resource ph	notographs	

Save as pdf





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 Watershed: OHWM Width: 4.6 feet Channelized/Type: Yes/Roadside Ditch OHWM Depth: 0.5 feet **USCOE Jurisdiction: Stream Type:** Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** Watershed Area: 0.01 sq mi 26

UTME: 1771147 ft **UTMN**: 14249966 ft

Ν

Legal Drain (Y/N):

Stream S5-S085c – Modified Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	203	0.02	0.00	
5	203	0.02	0.00	
6	203	0.02	0.12	
7	203	0.02	0.01	
8	203	0.02	0.00	
RPA 8	203	0.02	0.00	

Predominant Sub:

Muck/leaf pack

Description of Potential Impact:

Impacts to S5-S085c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a roadside ditch with a muck, clay, and silt bottom. There is a narrow riparian corridor associated with this man-made drainageway. This ditch flows into an emergent wetland. The adjacent floodplain consists of maintained INDOT ROW on the left side and shrub rangeland on the right. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S085c are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



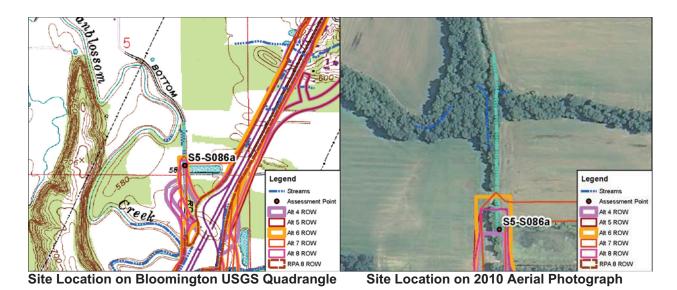
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S085c RIVER BASIN White River DRAINAGE AREA (r	ni²) 0.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.23898 LONG. RIVER CODE RIVER M	ILE
DATE 04/24/12 SCORER KSS COMMENTS (Long: -86.53827) *(Roadside Ditch-Modifie	d Class I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for	Instructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO MODIFICATIONS:) RECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE bo	xes I HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 25%	Points
BOULDER (>256 mm) [16 pts]	Substrate
☐ ☐ COBBLE (65-256 mm) [12 pts] ☐ ☐ CLAY or HARDPAN [0 pt] ☐ 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]	6
Ortho (*2 mm) [o pto]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters):	5
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankfull Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW = 4.6'/0.5' AVERAGE BANKFULL WIDTH (meters):	40 15
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\times NOTE: River Left (L) and Right (R) as looking downstream	า่่
RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	
☐ Wide >10m ☐ Mature Forest, Wetland ☐ Conservation Till	age
Moderate 5-10m Immature Forest, Shrub or Old V Urban or Industri	al
Narrow <5m Residential, Park, New Field Open Pasture, R	ow Crop
None Fenced Pasture Mining or Constru	uction
COMMENTS	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
■✓ ■ Stream Flowing ■ ■ Moist Channel isolated pools no flow (Internal Channel isolated pools no flow (Internal Channel Internal Channel Channel Internal Channel C	nittent)
Stream Flowing Subsurface flow with isolated pools (Interstitial) OOMMENTS OOMMENTS	nittent)
	nittent)
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	nittent)
Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	nittent)
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 3.5 STREAM GRADIENT ESTIMATE	
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 3.5 STREAM GRADIENT ESTIMATE	(10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed)	:	S5-S085c
	- attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	,	
WWH Name: Beanblossom Creek	Distance from Evaluated Stream	0.30
CWH Name:	Distance from Evaluated Stream	
EWH Name:	Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSH	IED AREA. CLEARLY MARK THE SITE L	OCATION
USGS Quadrangle Name: Bloomington NRCS Soil Ma	o Page: NRCS Soil Map Stream	Order _
County: Monroe Township / City: Block	omington	
MISCELLANEOUS		
Base Flow Conditions? (Y/N): Y Date of last precipitation: 04/19/12	Quantity: 0.20	
Photograph Information:		
Elevated Turbidity? (Y/N): N Canopy (% open): 95%		
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or in	d. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:		
Additional comments/description of pollution impacts:		
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optic	nal. NOTE: all voucher samples must be la	abeled with the site
ID number. Include appropriate field data sheets from the	Primary Headwater Habitat Assessment Ma	anual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinverteb	Voucher? (Y/N) N Prates Observed? (Y/N) Voucher? (N
	orates Observed? (Y/N) N Voucher? (1714)
Comments Regarding Biology:		
DRAWING AND NARRATIVE DESCRIPTION OF STREAM	I REACH (This <u>must</u> be comple	ted):
Include important landmarks and other features of interest for site evaluation	and a narrative description of the stream	m's location



See Stream Assessment Form S5-S085c for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream **USGS** Quadrangle: Bloomington Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 OHWM Width: Watershed: 1.9 feet Channelized/Type: Yes/Roadside Ditch OHWM Depth: 0.1 feet Stream Type: **USCOE** Jurisdiction: Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes 34

Evaluation Score: 34 **Watershed Area**: 0.02 sq mi **Legal Drain (Y/N)**: N **Predominant Sub**: Clay/gravel

UTME: 1769827 ft **UTMN**: 14249472 ft

Stream S5-S086a – Modified Class II PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	0	0.00	0.00	
5	142	0.01	0.00	
6	210	0.01	0.00	
7	228	0.01	0.00	
8	142	0.01	0.00	
RPA 8	0	0.00	0.00	

Description of Potential Impact:

Impacts to S5-S086a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located east and parallel to Bottom Road. This nearly flat ditch flows between wetland systems. There is no riparian buffer associated with the left bank (Bottom Road). The right bank floodplain consists of an old field. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S086a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



Primary Headwater Habitat Evaluation Form

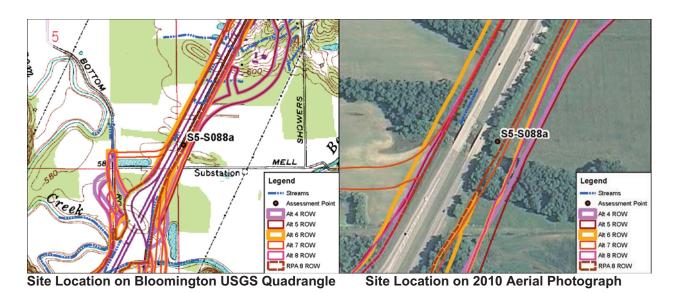
34

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 RIVER BASIN White River S5-S086a DRAINAGE AREA (mi²) 0.02 SITE NUMBER 200 LAT. **39.23764** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE COMMENTS (Long: -86.54295) (Roadside Ditch-Modified Class II) DATE 05/12/06 A Rogers SCORER NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY STREAM CHANNEL **MODIFICATIONS:** SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes HHEI (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. Metric **TYPE** PERCENT **PERCENT Points** BLDR SLABS [16 pts] SILT [3 pt] 10% BOULDER (>256 mm) [16 pts] LEAF PACK/WOODY DEBRIS [3 pts] 5% 0% **Substrate** 0% BEDROCK [16 pt] 0% FINE DETRITUS [3 pts] Max = 4060% 0% COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pt] 20% 0% GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 14 5% 0% SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts] Total of Percentages of (B) 0.00% 100% A + BBldr Slabs, Boulder, Cobble, Bedrock TOTAL NUMBER OF SUBSTRATE TYPES: 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of Pool Depth evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Max = 30> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 15 7 COMMENTS **MAXIMUM POOL DEPTH (centimeters):** BANK FULL WIDTH (Measured as the average of 3-4 measurements) Bankfull (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] Width Max=30 > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \leq 1.0 m (<=3' 3") [5 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.9' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.70 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH **FLOODPLAIN QUALITY** (Per Bank) R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Moderate 5-10m Urban or Industrial Field Open Pasture, Row Crop Narrow <5m Residential, Park, New Field Fenced Pasture None Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 0.5 1.5 >3 STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) ■ Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) / WWH Name: Beanblossom Creek Distance from Evaluated Stream CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: 18 NRCS Soil Map Stream Order
County: Monroe Township / City: Bloomington
MISCELLANEOUS
Base Flow Conditions? (Y/N):_N Date of last precipitation:05/12/06Quantity:0.39
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):65%
Were samples collected for water chemistry? (Y/N): Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the side of the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location
• Coo Charam Aggaggmanh Floren
See Stream Assessment Form S5-S086a for site topographic map,
aerial photograph, and resource photographs

Save as pdf

Reset Form



Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: SE Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 Watershed: OHWM Width: 1.9 feet Channelized/Type: Yes/Roadside Ditch OHWM Depth: 0.4 feet Stream Type: **USCOE** Jurisdiction: Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 19 Watershed Area: 0.01 sq mi

UTME: 1761288 ft **UTMN**: 14249764 ft

Ν

Legal Drain (Y/N):

Stream S5-S088a – Modified Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	20	0.01	0.09	
5	20	0.01	0.09	
6	20	0.01	0.09	
7	20	0.01	0.09	
8	20	0.01	0.09	
RPA 8	20	0.01	0.07	

Predominant Sub:

Clay/silt

Description of Potential Impact:

Impacts to S5-S088a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located east of and parallel to Bottom Road. This nearly flat ditch flows between wetland systems. There is no riparian buffer associated with the right bank (SR 37). The left bank has a moderately wide riparian buffer and a cropland in the adjacent floodplain. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S088a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

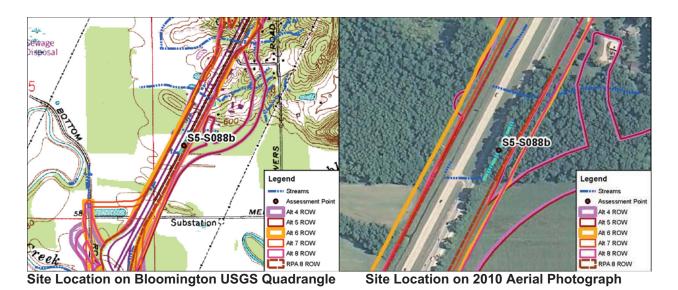


SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER_ S5-S088a RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ft) 20 LAT. 39.23842 LONG. RIVER CODE RIVER MILE	
DATE 05/12/06 SCORER A Rogers (Long: -86.53778) (Roadside Ditch-Modified Cla	ss I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] 0% SILT [3 pt] 30%	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts] 5% CLAY or HARDPAN [0 pt] 40%	Max = 40
GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] MUCK [0 pts] ARTIFICIAL [3 pts] 0%	9
Total of Percentages of 5 00% (A) Substrate Percentage (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 5 cm - 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 4	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	IVIAX-30
COMMENTS OHW - 1.9' / 0.4' AVERAGE BANKFULL WIDTH (meters): 0.70	5
	· J
This information must also be completed PIPARIAN ZONE AND ELOODELAIN QUALITY (Chi)OTE: Biver Left (L) and Bight (R) as legking downstroom?	. 3
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	. 3
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH LR (Most Predominant per Bank) LR	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Conservation Tillage Urban or Industrial	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Residential, Park, New Field NOTE: River Left (L) and Right (R) as looking downstream A NOTE: River Left (L) and Right (R) as looking downstream A River Left (L) and	rop
RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Conservation Tillage Urban or Industrial	rop
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Residential, Park, New Field Residential, Park, New Field River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) L R Conservation Tillage Immature Forest, Wetland Immature Forest, Shrub or Old Field Open Pasture, Row Cr None Fenced Pasture Mining or Construction COMMENTS	rop
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Park None COMMENTS FLOW REGIME (At Time of Evaluation) Check ONLY one box): Stream Flowing NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ NOTE: River Left (L) and Right (R) as looking downstream ★ Note: A looking	тор
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Fenced Pasture COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	тор
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Worderate 5-10m Residential, Park, New Field Park None COMMENTS FLOW REGIME (At Time of Evaluation) Subsurface flow with isolated pools (Interstitial) RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Wost Predominant per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Per Bank) L R (Per Bank) L R (Most Predominant per Bank) L R (Por Bank) L R (Per Bank) L R (Por Bank	тор
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) SINUOSITY (Number of bends per 61 m (200 ft) of channel) RIPARIAN WIDTH FLOODPLAIN QUALITY Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R Conservation Tillage Urban or Industrial Open Pasture, Row Cr Mining or Construction Moist Channel, isolated pools, no flow (Intermitten) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 3.0	тор
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Vopen Pasture, Row Cr None COMMENTS FLOW REGIME (At Time of Evaluation) COMMENTS FILOW REGIME (At Time of Evaluation) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	тор
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) SINUOSITY (Number of bends per 61 m (200 ft) of channel) RIPARIAN WIDTH FLOODPLAIN QUALITY Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R Conservation Tillage Urban or Industrial Open Pasture, Row Cr Mining or Construction Moist Channel, isolated pools, no flow (Intermitten) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 3.0	rop

ADDITIONAL STREAM	M INFORMATION (This Information Mus	t Also be Completed):		
QHEI PERF	ORMED? - Yes ✓ No QHEI Score	(If Yes, Attac	h Completed QHEI Form)
DOWNSTRE	EAM DESIGNATED USE(S)			
WWH Name: Bea	nblossom Creek		Distance from Evaluate	d Stream
CWH Name: _			Distance from Evaluated	d Stream _
EWH Name:			Distance from Evaluated	d Stream _
MAPPING:	ATTACH COPIES OF MAPS, INCLUDING T	HE ENTIRE WATERSHED	AREA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Na	me:_Bloomington	NRCS Soil Map Pa	ge: 18 NRCS Soil	Map Stream Order
County: Monroe		Township / City: Bloomir	ngton	
MISCELLAN	NEOUS			
Base Flow Conditions?		05/12/06	Quantity: 0.39	
Photograph Informatio	n: 5807 Upstream / 5805 Downstream			
Elevated Turbidity? (Y	/N): N Canopy (% open):	90%		
Were samples collecte	ed for water chemistry? (Y/N): (N	ote lab sample no. or id. ar	nd attach results) Lab Nu	mber:
	mp (°C) Dissolved Oxygen (mg/l	pH (S.U.)	Conductivity (µmh	nos/cm)
Is the sampling reach	representative of the stream (Y/N) Y	If not, please explain:		
Additional comments/o	description of pollution impacts:			
BIOTIC EV	ALUATION			
Performed? (Y/N): _N	(If Yes, Record all observations. VID number. Include appropriate fie	·	·	
Fish Observed? (Y/N)	Voucher? (Y/N) Salamand	ders Observed? (Y/N)	Voucher? (Y/N)	
Frogs or Tadpoles Obs	served? (Y/N) Voucher? (Y/N)	Aquatic Macroinvertebrate	s Observed? (Y/N)	Voucher? (Y/N)
Comments Regarding	Biology:			
DRAWI	NG AND NARRATIVE DESCRIPT	TION OF STREAM RE	EACH (This must b	e completed):
Include importa	nt landmarks and other features of inter	est for site evaluation and	a narrative description	of the stream's location
morado importa		oot for once ovaluation and	a numuate accomplica	
_	See Stream Assessment	Form		
FLOW -	S5-S088a for site top			
	_			
	aerial photograph, ar	ıa resource ph	otographs	

Save as pdf

Reset Form



Aquatic Resource: Stream **USGS** Quadrangle: Bloomington Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: SW Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 OHWM Width: Watershed: 5.0 feet Channelized/Type: Yes/Roadside Ditch **OHWM Depth:** 0.5 feet Stream Type: **USCOE** Jurisdiction: Ephemeral Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** Watershed Area: 0.01 sq mi 31

Evaluation Score: 31 Watershed Area: 0.01 sq m Legal Drain (Y/N): N Predominant Sub: Muck/silt

UTME: 1771885 ft **UTMN**: 14250786 ft

Stream S5-S088b – Modified Class II PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	345	0.04	0.54	
5	345	0.04	0.55	
6	345	0.04	0.78	
7	345	0.04	0.54	
8	345	0.04	0.78	
RPA 8	345	0.04	0.47	

Description of Potential Impact:

Impacts to S5-S088b for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The roadside ditch is located adjacent to SR 37. Substrate primarily consists of muck and silt. There is no riparian buffer associated with the right bank (SR 37). The wide left side riparian corridor and associated floodplain consists of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S088b are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

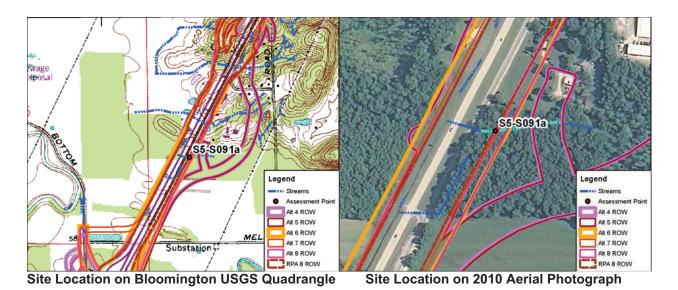


31

SITE NUMBER S5-S088b RIVER BASIN White River DRAINAGE AREA (mi²) 0.01	SITE NAME/LOCATION I-69 Section 5	
LENGTH OF STREAM REACH (N) 200 LAT, 39.24122 LONG RIVER RODE RIVER MILE DATE O4/24/12 SCORER KSS COMMENTS (LOng: -86.53601) (Roadside Ditch-Modified Class II) NOTE: Complete All Rens On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY MODIFICATIONS: 1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two prodominant substrato TYPE boxes (Max of 22), Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 22), Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 22), Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 22), Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of boxes A & B. HERCENT (Max of 8). Final metric score is sum of 8. Final metric score is sum of 8. Final metric score is sum of 8. Fin		01
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL	000	
STREAM CHANNEL	DATE 04/24/12 SCORER KSS COMMENTS (Long: -86.53601) (Roadside Ditch-Modified Clas	s II)
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. BEROKO (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. BEROKO (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. BEROKO (Max of 8). Final metric score is sum of boxes A & B. BEROKO (Max of 82). Final metric score is sum of boxes A & B. BEROKO (Max of 92). Final metric score is sum of boxes A & B. BEROKO	NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	uctions
Max of 32), Add total number of significant substrate types found (Max of 8), Final metric score is sum of boxes A & B. Metric Formation Met		OVERY
Metric Points Substrate Parcentage		UUEI
BLDR SLABS [16 pts]		Metri
BEDROCK [16 pt]	□ □ BLDR SLABS [16 pts] □ □ □ SILT [3 pt] 16%	Points
COBBLE (68-256 mm) 12 pts 0% 0% 0% 0% 0% 0% 0% 0		
SAND (<2 mm) [6 pts] 0%		Max = 40
Total of Percentages of 0.00% (A)	Oravez (2-04 mm) [o pis]	6
Bidr Slabs, Boulder, Cobble, Bedrock U.00% SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culvers or storm water pipes) (Check ONLY one box): > 30 centimeters (20 pts)	SAND (<2 mm) [6 pts] ARTIFICIAL [3 pts]	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters (20 pts) > 5 cm - 10 cm [15 pts] > 5 cm 50 cm [5 pts] > 10 - 22.5 cm 25 pts	Total of Total and U_UU% (A)	A + B
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 3 ocentimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.5 m - 3.0 m (> 9' 7' - 13') [20 pts] COMMENTS COMMENTS BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 1.5 m - 3.0 m (> 9' 7' - 14' 8') [20 pts] COMMENTS OHW = 5'/0.5' AVERAGE BANKFULL WIDTH (meters): 1.52 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY **NOTE: River Left (L) and Right (R) as looking downstream ** RIPARIAN WIDTH R		
> 30 centimeters [20 pts] > 5 cm -10 cm [15 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S cm [5 pts] NO WATER OR MOIST CHANNEL [0 pts] S cm [5 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] NO WATER OR MOIST CHANNEL [0 pts] S com [25 pts] S c	, , , , , , , , , , , , , , , , , , , ,	-
22.5 cm 30 cm 30 pts		Max = 30
ANAXIMUM POOL DEPTH (centimeters): 3 BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): 3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): 3. Check ONLY one box): 3. Check ONLY one box): 3. Check ONLY one box): 4.0 m eters (> 13) (30 pts) 5.1.0 m - 1.5 m (> 3' 3" - 4' 8") (15 pts) 5.1.0 m (<=3' 3") [5 pts] 5.1.0 m (<=3' 3") [5 pts] 6.1.0 m (<=3' 3") [5 pts] 7. COMMENTS OHW = 5'/0.5' AVERAGE BANKFULL WIDTH (meters): 6.1.0 m (<=3' 3") [5 pts] 7. COMMENTS OHW = 5'/0.5' AVERAGE BANKFULL WIDTH (meters): 7. COMMENTS OHW = 5'/0.5' AVERAGE BANKFULL WIDTH (meters): 8.1.52 20 20 20 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY \$\times \text{NOTE: River Left (L) and Right (R) as looking downstream:}\$\text{RIPARIAN WIDTH FLOODPLAIN QUALITY} \$\times \text{RIPARIAN WIDTH FLOODPLAIN QUALITY} \$\times \text{Most Predominant per Bank} L R (Most Predominant per Bank) L R Conservation Tillage Immature Forest, Weltand Immature Forest, Weltand Immature Forest, Shrub or Old Immature Forest, New Field Immature Forest, New	> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	_
BankFull WiDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13) [30 pts] > 4.0 meters (> 13) [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 5'/0.5' AVERAGE BANKFULL WIDTH (meters): 1.52 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Note and Right (R) as	> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
34.0 meters (> 13') [30 pts]	COMMENTS MAXIMUM POOL DEPTH (centimeters): 3	
Average Bankfull Width (Reters): Average Bankfull Width (meters): 1.52 20		
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY		
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Immature Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None COMMENTS Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 >3.0		
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None Fenced Pasture FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3	COMMENTS OHW = 5'/0.5' AVERAGE BANKFULL WIDTH (meters): 1.52	20
RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None Fenced Pasture FLOW REGIME (At Time of Evaluation) COMMENTS Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) OTHER STREAM GRADIENT ESTIMATE		
RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Field Narrow <5m Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 1.0 2.0 2.0 3.0 3.0 3.0 STREAM GRADIENT ESTIMATE		
Wide >10m		
Moderate 5-10m		
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 O.5 3.0 >3 STREAM GRADIENT ESTIMATE	Immature Forest Shrub or Old	
None	Field — Open Pacture Row Cro	n
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 1.0 2.0 2.0 3.0 3.0 3.0 3.5 STREAM GRADIENT ESTIMATE	Narrow < 5m Residential, Park, New Field	p
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 0.5 STREAM GRADIENT ESTIMATE Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) (Check ONLY one box): 2.0 2.5 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0		
Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) None 0.5 STREAM GRADIENT ESTIMATE Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) (Check ONLY one box): 2.0 2.5 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 >3 STREAM GRADIENT ESTIMATE	Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	
None 1.0 2.0 3.0 >3		
None 1.0 2.0 3.0 >3	SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONI V one box):	
STREAM GRADIENT ESTIMATE	✓ None ☐ 1.0 ☐ 2.0 ☐ 3.0	
	□ 0.5 □ 1.5 □ 2.5 □ >3	
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	டு Flat (0.5 π/100 π) பு Flat to iniquerate பு iniquerate (2 ft/100 ft) பு iniquerate to Severe பு Severe (10 ft/10	υ π)

ADDITIONAL STR	EAM INFORMATION	ON (This Information Must	Also be Completed)	<u>:</u>	55 5	OOOD
QHEI PE	RFORMED? -	Yes No QHEI Score	(If Yes, A	Attach Completed QHEI F	orm)	
DOWNS	TREAM DESIGNA	TED USE(S)				
	Beanblossom Cre			Distance from Evalu	uated Stream 0.57	
CWH Name:				Distance from Evalu	uated Stream	
EWH Name:				Distance from Evalu	ated Stream _	
MAPPIN	G: ATTACH COPIE	S OF MAPS, INCLUDING TH	E <u>ENTIRE</u> WATERSH	ED AREA. CLEARLY MA	ARK THE SITE LOCATION	
USGS Quadrangle	Name: Blooming	ton	NRCS Soil Map	Page: NRCS	Soil Map Stream Order	
County: Monroe		т	ownship / City: Bloc	omington		
MISCEL	LANEOUS					
Base Flow Condition	ons? (Y/N): Y	_ Date of last precipitation:	04/19/12	Quantity: 0.2	20	_
Photograph Inform	ation: _					
Elevated Turbidity?	? (Y/N): _ N	Canopy (% open):	95%			
Were samples coll	ected for water che	emistry? (Y/N): N (No	te lab sample no. or id	d. and attach results) Lab	Number:	
Field Measures:	Temp (°C)	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmhos/cm)	
Is the sampling rea	ach representative	of the stream (Y/N)	not, please explain:_			
	·	,				
Additional commer	nts/description of po	ollution impacts:				
BIOTIC	EVALUATION					
Performed? (Y/N):		s, Record all observations. Vo	·		•	the site
			,	N N	1 Assessment Wandary	_
Fish Observed? (Y	/N) Vouch		ers Observed? (Y/N)		N N	
Frogs or Tadpoles		Voucher? (Y/N) N	quatic Macroinverteb	prates Observed? (Y/N)	Voucher? (Y/N)	_
Comments Regard	ling Biology:					
DRA	WING AND NA	RRATIVE DESCRIPT	ON OF STREAM	REACH (This mus	t be completed):	
		and other features of intere		-		ion
merade mp	ortant ianumarks c	and other realures of interes	st ior site evaluation	and a namative descript	ion of the stream's locati	OII
	See Stre	eam Assessment	Form			
FLOW -	S5-S088k	for site topo	ographic ma	p,		
		photograph, and	_	_		
	voriar F	and cograph, and	~ TODOUTOG	L-10 COST abits		





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: SW Township: T9N Range: R1W IDEM 303(d) List: N/A OHWM Width: Watershed: 05120202010 3.0 feet Channelized/Type: No/Natural OHWM Depth: 1.0 feet Stream Type: **Ephemeral USCOE** Jurisdiction: Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score:35Watershed Area:0.02 sq miLegal Drain (Y/N):NPredominant Sub:Silt/Leafpack

UTME: 1772004 ft **UTMN**: 14251068 ft

Stream S5-S091a – Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	245	0.02	1.00	
5	247	0.02	1.00	
6	148	0.01	0.64	
7	90	0.01	0.36	
8	140	0.01	0.61	
RPA 8	73	0.01	0.31	

Description of Potential Impact:

Impacts to S5-S091a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately silt and leafpack. There is a moderate riparian buffer associated with this stream. The floodplain consists of mature forests on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S091a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



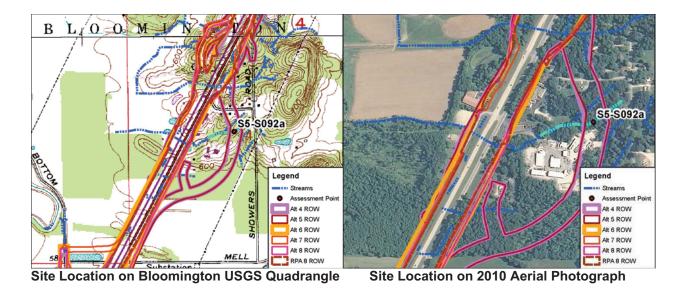
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S091a RIVER BASIN White River DRAINAGE AREA (mi²)	0.02
LENGTH OF STREAM REACH (ft) 435 LAT. 39.24205 LONG. RIVER CODE RIVER MILE	
DATE 02/19/13 SCORER DEW COMMENTS (Long: -86.53473) (Natural - Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	ı HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts]	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt]	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ 0% ☐ ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ ☐ O% ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	10
Total of Percentages of Ongo, (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	A+B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 4	<u> </u>
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]	20
COMMENTS MAXIMUM POOL DEPTH (centimeters): 30	
2 DANK FULL MIDTH (Macanized on the greener of 2.4 macanizements) (Charle OM View how):	Ponkful
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ∴ NOTE: River Left (L) and Right (R) as looking downstream ∴ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Conservation Tillage	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH L R (Per Bank) Wide >10 m Wide	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Wide >10m Mature Forest, Wetland Immature Forest, Shrub or Old Immature Forest, Shrub or Old Narrow <5m Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH FLOODPLAIN QUALITY Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH (meters): 0.91 Moderate 5-10m None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitter	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream in the completed of the complete of the c	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.0'/1.0' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Must Also	be Completed):
QHEI PERFORMED? - Yes ✓ No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Beanblossom Creek CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE EN	TIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Monroe Towns	hip / City:Bloomington
MISCELLANEOUS	
Base Flow Conditions? (Y/N):_Y Date of last precipitation:	02/19/13 Quantity:0.20
Photograph Information:	
Elevated Turbidity? (Y/N): N Canopy (% open): 10%	o l
Were samples collected for water chemistry? (Y/N): (Note lab	sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not,	please explain:
Additional comments/description of pollution impacts:	
ID number. Include appropriate field data Fish Observed? (Y/N) N Salamanders O	collections optional. NOTE: all voucher samples must be labeled with the site sheets from the Primary Headwater Habitat Assessment Manual) pserved? (Y/N) N Voucher? (Y/N) N Vo
DRAWING AND NARRATIVE DESCRIPTION	OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for	site evaluation and a narrative description of the stream's location
See Stream Assessment E S5-S091a for site topog aerial photograph, and	raphic map,

PHWH Form Page - 2

Save as pdf





Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A OHWM Width: Watershed: 05120202010 2.4 feet Channelized/Type: No/Natural **OHWM Depth:** 0.7 feet Stream Type: Ephemeral **USCOE Jurisdiction:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 28 Watershed Area: 0.04 sq mi

Legal Drain (Y/N): N Predominant Sub: Clay/fine detritus

UTME: 1773339 ft **UTMN**: 14252011 ft

Stream S5-S092a – Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	273	0.02	1.13
5	263	0.01	1.09
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S092a for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately clay and fine detritus. There is a wide riparian buffer associated with this stream where Alternatives 4 and 5 cross this stream. The floodplain consists of mature forests on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S092a are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

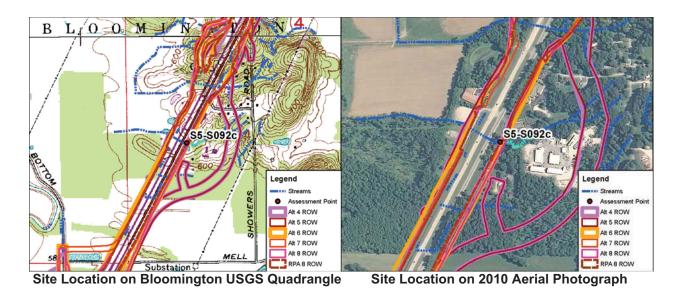


28

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S092a RIVER BASIN White River DRAINAGE AREA (mi²)	0.04
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24456 LONG. RIVER CODE RIVER MILE	
DATE 05/11/06 SCORER J Meeker COMMENTS (Long: -86.53049) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	ı HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
□ □ BLDR SLABS [16 pts] □ □ SILT [3 pt] 5%	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts]	Max = 40
GRAVEL (2-64 mm) [9 pts] 0% MUCK [0 pts] 5%	8
SAND (<2 mm) [6 pts]	
Total of Percentages of 0.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	4.5
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	15
COMMENTS MAXIMUM POOL DEPTH (centimeters): 7	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW - 2.4' / 0.7' AVERAGE BANKFULL WIDTH (meters): 0.75	5
	5
COMMENTS OHW - 2.4' / 0.7' AVERAGE BANKFULL WIDTH (meters): 0.75 This information <u>must</u> also be completed	5
COMMENTS OHW - 2.4' / 0.7' AVERAGE BANKFULL WIDTH (meters): 0.75	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY PLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 0.75 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY PLOODPLAIN QUALITY LR (Per Bank) LR (Most Predominant per Bank) LR	5
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and River Left (L)	5
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This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Wide >10m Moderate 5-10m AVERAGE BANKFULL WIDTH (meters): 0.75 L R (Not Predominant per Bank) L R (Most Predominant per Bank) Urban or Industrial	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) V Wide >10m Moderate 5-10m Residential, Park, New Field None AVERAGE BANKFULL WIDTH (meters): 0.75 This information must also be completed RIPARIAN WIDTH (R) as looking downstream And Right (R)	rop
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY LR (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None Residential, Park, New Field AVERAGE BANKFULL WIDTH (meters): 0.75 AVERAGE BANKFULL WIDTH (meters): 0.7	rop
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This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY *NOTE: River Left (L) and Right (R) as looking downstream *Note = Note	rop
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY PLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) COMMENTS AVERAGE BANKFULL WIDTH (meters): O.75 AVERAGE BANKFULL WIDTH (Laboration) (Check ONLY) and Right (R) as looking downstream of the properties of	rop
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This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY PLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) COMMENTS AVERAGE BANKFULL WIDTH (meters): O.75 AVERAGE BANKFULL WIDTH (Laboration) (Check ONLY) and Right (R) as looking downstream of the properties of	rop
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream: RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m V Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 COMMENTS AVERAGE BANKFULL WIDTH (meters): 0.75 This information must also be completed NOTE: NOTE: Note Completed Note: Note Channel (L) and Right (R) as looking downstream: AND A solution (Conservation Tillage Immature Forest, Wetland Conservation Tillage Urban or Industrial Open Pasture, Row C Mining or Construction Comments Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 3.0	rop
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Moderate 5-10m Moderate 5-10m Residential, Park, New Field Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3	rop t)

ADDITIONAL STREAM	I INFORMATION (This Information Must Also	o be Completed):		S5-S092a
QHEI PERF	ORMED? - Yes / No QHEI Score	(If Yes, Attac	ch Completed QHEI Form)
DOWNSTRE WWH Name: Bear CWH Name: EWH Name:	EAM DESIGNATED USE(S) nblossom Creek		_ Distance from Evaluated _ Distance from Evaluated _ Distance from Evaluated	Stream _
	ATTACH COPIES OF MAPS, INCLUDING THE <u>E</u>	NTIRE WATERSHED	AREA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Na	me:_Bloomington	NRCS Soil Map Pa	age: 18 NRCS Soil N	Map Stream Order 2
County: Monroe	Towns	ship / City:Bloomi	ngton	
MISCELLAN	EOUS			
Base Flow Conditions?		05/11/06	Quantity: 0.60	
Photograph Information	n: 87 Upstream / 88 Downstream / 89 Right	Bank / 90 Left Bank		
Elevated Turbidity? (Y/	N): _ N Canopy (% open): _ 45°	%		
Were samples collecte	d for water chemistry? (Y/N): _N (Note la	b sample no. or id. a	nd attach results) Lab Nur	mber:
Field Measures: Te	mp (°C) Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmh	os/cm)
	representative of the stream (Y/N) Y If not lescription of pollution impacts:	, please explain:		
Additional comments/c	escription or politicon impacts			
BIOTIC EV/NPerformed? (Y/N): NPerformed? (Y/N): NPerformed? (Y/N) Frogs or Tadpoles Observed? (Y/N) Comments Regarding	(If Yes, Record all observations. Voucher ID number. Include appropriate field dat Voucher? (Y/N) Salamanders Coerved? (Y/N) Voucher? (Y/N) Aqua		nary Headwater Habitat Ass Voucher? (Y/N)	
DRAWI	NG AND NARRATIVE DESCRIPTION	OF STREAM R	EACH (This <u>must</u> be	e completed):
Include importa	nt landmarks and other features of interest fo		d a narrative description	of the stream's location
FLOW -	See Stream Assessment For Site topographic			
	S5-S092a for site topoga aerial photograph, and			





Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: SW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 **OHWM Width:** 4.0 feet Channelized/Type: No/Natural OHWM Depth: 0.6 feet Stream Type: Ephemeral **USCOE** Jurisdiction: Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 43 Watershed Area: 0.04 sq mi

UTME: 1772307 ft **UTMN**: 14251772 ft

Ν

Legal Drain (Y/N):

Stream S5-S092c – Class II PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	16	0.01	0.06
5	17	0.01	0.06
6	56	0.01	0.16
7	17	0.01	0.06
8	69	0.01	0.16
RPA 8	17	0.01	0.12

Predominant Sub:

Silt/sand

Description of Potential Impact:

Impacts to S5-S092c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately silt and sand. There is a wide riparian buffer associated with this stream's right bank and a moderately wide buffer associated with the left bank where Alternatives 4 and 5 cross this stream. The floodplain consists of mature forests on the right and a pond on the left. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S092c are on the second page of this form.



Photograph Taken Upstream

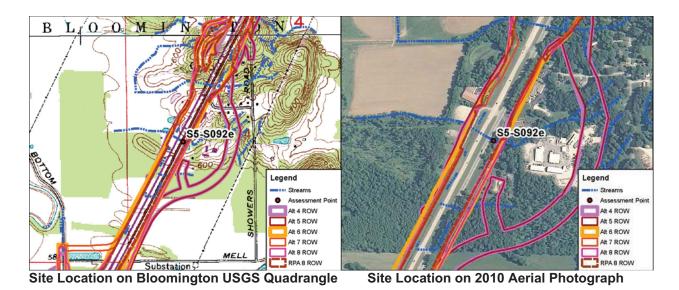




SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S092c RIVER BASIN White River DRAINAGE AREA (mi²)	0.04
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24391 LONG. RIVER CODE RIVER MILE	
DATE 10/17/11 SCORER DEW/KSS COMMENTS (Long: -86.53389) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	ı HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] 0% SILT [3 pt] 60%	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts]	Max = 4
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0% SAND (<2 mm) [6 pts] 30% ARTIFICIAL [3 pts] 0%	13
Title (B)	
Total of Percentages of O.00% (A) Substrate Percentage Check 100% (B)	A+B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts]	15
	15
COMMENTS MAXIMUM POOL DEPTH (centimeters): 9	
	l
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankful Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [5 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' AVERAGE BANKFULL WIDTH (meters): 1.22	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [5 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: RIPARIAN WIDTH FLOODPLAIN QUALITY FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' AVERAGE BANKFULL WIDTH (meters): 1.22 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per B	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH L R (Per Bank) Wide >10 m Wide >10 m Mature Forest, Wetland Wide >10 m Moderate 5-10 m Conservation Tillage Immature Forest, Shrub or Old	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH L R (Per Bank) Wide >10 m Wide >10 m Mature Forest, Wetland Wide >10 m Moderate 5-10 m Conservation Tillage Immature Forest, Shrub or Old	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitter) Moist Channel, isolated pools, no flow (Intermitter)	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m Mature Forest, Wetland Moderate 5-10 m Narrow <5 m None Residential, Park, New Field None COMMENTS Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) No water (Ephemeral)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 13') [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30 15 Trop nt)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	S5-S092c
	ah Consolated OUEL Faces
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Atta	ch Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name:	Distance from Evaluated Stream
CWH Name:	Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED	AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map Pa	age: NRCS Soil Map Stream Order
County: Township / City: Township	hip 8 North
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: 10/13/11	Quantity: 0.25
Photograph Information:	
Elevated Turbidity? (Y/N):N Canopy (% open):5%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. a	and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional.	•
ID number. Include appropriate field data sheets from the Prin	nary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Aquatic Macroinvertebrate	voucher? (Y/N) Voucher? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	N
	_
DRAWING AND NARRATIVE DESCRIPTION OF STREAM R	EACH (This <u>must</u> be completed):
Include important landmarks and other features of interest for site evaluation and	d a narrative description of the stream's location
See Stream Assessment Form	
S5-S092c for site topographic map	
aerial photograph, and resource pl	

Reset Form



Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: SW Township: T9N Range: R1W IDEM 303(d) List: N/A OHWM Width: Watershed: 05120202010 4.0 feet Channelized/Type: No/Natural **OHWM Depth:** 0.6 feet Stream Type: Ephemeral **USCOE** Jurisdiction: Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 53 Watershed Area: 0.04 sq mi

UTME: 1772307 ft **UTMN**: 14251772 ft

Ν

Legal Drain (Y/N):

Stream S5-S092e – Class II PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	15	0.01	0.00
5	15	0.01	0.00
6	15	0.01	0.00
7	15	0.01	0.00
8	15	0.01	0.00
RPA 8	15	0.01	0.00

Predominant Sub:

Silt/sand

Description of Potential Impact:

Impacts to S5-S092e for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate is predominately silt and sand. There is a narrow riparian buffer associated with this stream. The floodplain is in transportation use. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S092e are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream

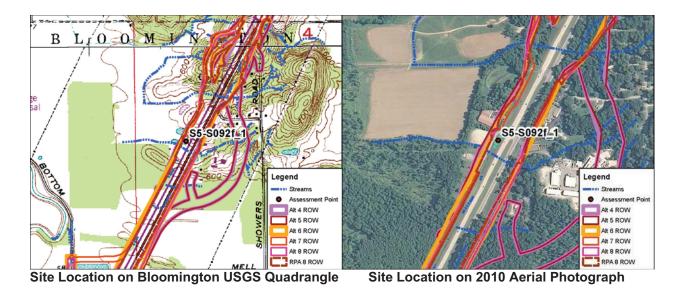


53

SITE NAME/LOCATION I-69 Section 5 SITE NUMBER S5-S092e RIVER BASIN White River DRAINAGE AREA (mi²)).04
LENGTH OF STREAM REACH (ft) 15 LAT. 39.24392 LONG. RIVER CODE RIVER MILE	
DATE 10/17/11 SCORER DEW/KSS COMMENTS (Long: -86.53414) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instru	cuctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVERED RECOVERING RECENT OR NO RECOVERED	OVERY
SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (May of 30) Add to be present of predictions to the box of substrate present.	HHE
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 60%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5% 0% 0% FINE DETRITUS [3 pts]	Substrat
COBBLE (65-256 mm) [12 pts]	Max = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0% SAND (<2 mm) [6 pts] 30% ARTIFICIAL [3 pts] 0%	13
SAME (12 min) [6 pts]	
Total of Percentages of 0.00% (A) Substrate Percentage Check 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	25
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	25
COMMENTS MAXIMUM POOL DEPTH (centimeters): 15	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	
	Bankful
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.0'/0.6' AVERAGE BANKFULL WIDTH (meters): 1.22 This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.0'/0.6' AVERAGE BANKFULL WIDTH (meters): 1.22	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.0'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.0'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Conservation Tillage Note: River Left (L) and Right (R) as looking downstream	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] ≤ 1.0	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
2	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.0'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Noist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.0'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.0'/0.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) None water (Ephemeral) > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] 1.22 1.22 1.22 1.22 1.22 1.22 1.22 1.22 2.3 m (<=3' 3") [5 pts] 2.4 m (<=3' 3") [5 pts] 2.1 m (<=3' 3") [5 pts] 3.0 m - 4.0 m (<=3' 3") [5 pts] 4 m (<=3' 3") [5 pts] 2.1 m (<=3' 3") [5 pts] 2.1 m (<=3' 3") [5 pts] 3.1 m (<=3' 3") [5 pts] 4 m (<=3' 3") [5 pts] 5 m (= 3' 3") [5 pts] 6 m (= 3' 3") [5 pts] 6 m (= 3' 3") [5 pts] 6 m (= 3' 3") [5 pts] 7 m (= 3' 3") [5 pts] 8 m (= 3' 3") [5 pts] 9 m (= 3' 3") [5 pts] 1.22 1.	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.070.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) an	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7' - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7' - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7' - 13') [25 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW 4.070.6' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY ★NOTE: River Left (L) an	Width Max=30

ADDITIONAL STREA	AM INFORMATION (This Information Must Also b	e Completed):	55 50520
QHEI PER	FORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)	
DOWNSTF	REAM DESIGNATED USE(S)		
WWH Name: Be	eanblossom Creek	_ Distance from Evaluated Strea	am
CWH Name:		Distance from Evaluated Strea	ım
EWH Name:		Distance from Evaluated Strea	m _
MAPPING	: ATTACH COPIES OF MAPS, INCLUDING THE ENTI	<u>re</u> watershed area. Clearly mark the s	ITE LOCATION
USGS Quadrangle N	lame: Bloomington	NRCS Soil Map Page: NRCS Soil Map Si	tream Order
County: Monroe	Township	o / City:Bloomington	
MISCELLA	ANEOUS		
Base Flow Conditions	s? (Y/N):_Y Date of last precipitation:	Quantity:0.00	
Photograph Informati			
Elevated Turbidity? (
Were samples collec		ample no. or id. and attach results) Lab Number:_	
		pH (S.U.) Conductivity (μmhos/cm)
Is the sampling reach	h representative of the stream (Y/N) Y If not, plo	ease explain:	
L			
Additional comments	s/description of pollution impacts:		
BIOTIC E	VALUATION		
Performed? (Y/N): _		ollections optional. NOTE: all voucher samples mus	
		N N	in wandary
Fish Observed? (Y/N	I) Voucher? (Y/N) Salamanders Obs	erved? (Y/N) Voucher? (Y/N)	N N
Frogs or Tadpoles Ol	11 11	Macroinvertebrates Observed? (Y/N) N Vouch	ner? (Y/N)
Comments Regarding	g Biology:		
			· · · · · · · · · · · · · · · · · · ·
DDAW	VINC AND NADDATIVE DESCRIPTION O	E STREAM REACH /This must be some	an lote d\.
DRAW	ING AND NARRATIVE DESCRIPTION O	F STREAM REACH (This must be con	npietea):
Include import	tant landmarks and other features of interest for si	ite evaluation and a narrative description of the	stream's location
•			
FLOW	See Stream Assessment For	m	
- 	S5-S092e for site topograp	phic map,	
	aerial photograph, and re	source photographs	

Reset Form



Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 1.0 feet Channelized/Type: Yes/Concrete Gutter **OHWM Depth:** 0.15 feet Stream Type: **USCOE Jurisdiction:** Ephemeral No **Evaluation Type:** HHEI **IDEM Jurisdiction:** No

Evaluation Type: FIRE IDEM JURISDICTION: NO

Evaluation Score: 12 Watershed Area: 0.01 sq mi

Legal Drain (Y/N): N Predominant Sub: Artificial

UTME: 1772189 ft **UTMN**: 14252020 ft

Stream S5-S092f_1 – Modified Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	137	0.01	0.00
5	137	0.01	0.00
6	137	0.01	0.00
7	137	0.01	0.00
8	137	0.01	0.00
RPA 8	137	0.01	0.00

Description of Potential Impact:

Impacts to S5-S092f_1 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter situated in between SR 37 and an unnamed frontage road. This channel flows into a wetland. There is no riparian buffer associated with this artificial channel. The floodplain consists of the maintained INDOT ROW. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S092f 1 are on the second page of this form.



Photograph Taken Upstream

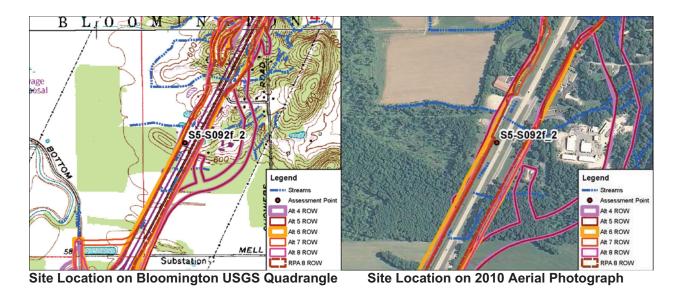


Photograph Taken Downstream



SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S092f_1 RIVER BASIN White River DRAINAGE AREA (mi²) 0	.01
LENGTH OF STREAM REACH (ft) 135 LAT. 39.24461 LONG. RIVER CODE RIVER MILE	
DATE 04/25/12 SCORER KSS/DEW COMMENTS (Long: -86.53456) (Concrete Gutter-Modified Cla	ss I)
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING:	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
□ □ BLDR SLABS [16 pts] □ □ SILT [3 pt] □ 0%	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]	7
SAND (<2 mm) [6 pts]	L
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 1	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	
COMMENTS OHW 1.0'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.30	5
This information must also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆ RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R	
Wide >10m	
Moderate 5-10m Field Urban or Industrial	
Narrow <5m Residential, Park, New Field Open Pasture, Row Cro	pp
None Fenced Pasture Mining or Construction	
COMMENTS	-
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Subsurface flow with isolated pools (Interstitial) Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral))
	-
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	-
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 3.0	-
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0 3.0 3.5 1.5	-
Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 3.0	-





Aquatic Resource: Stream **USGS** Quadrangle: Bloomington **Stream Name:** Unnamed Trib Beanblossom Ck Section: Quarter: SW Township: T9N Range: R1W IDEM 303(d) List: N/A 05120202010 Watershed: OHWM Width: 1.0 feet Channelized/Type: Yes/Concrete Gutter **OHWM Depth:** 0.2 feet Stream Type: **USCOE Jurisdiction:** Ephemeral No **Evaluation Type:** HHEI **IDEM Jurisdiction:** No

Evaluation Score:12Watershed Area:0.01 sq miLegal Drain (Y/N):NPredominant Sub:Artificial

UTME: 1772011 ft **UTMN**: 14251635 ft

Stream S5-S092f_2 – Modified Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	57	0.01	0.00
5	57	0.01	0.00
6	57	0.01	0.00
7	57	0.01	0.00
8	57	0.01	0.00
RPA 8	57	0.01	0.00

Description of Potential Impact:

Impacts to S5-S092f_2 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists of a concrete gutter situated in between SR 37 and an unnamed frontage road. This channel flows into a wetland. There is no riparian buffer associated with this artificial channel. The floodplain consists of the maintained INDOT ROW. Photographs taken upstream in the area where these Alternatives cross S5-S092f 2 are on the second page of this form.



Photograph Taken Upstream



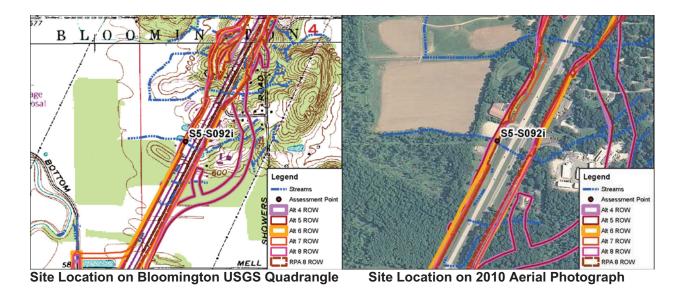
Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3): SITE NAME/LOCATION I-69 Section 5 SITE NUMBER S5-S092f_2 RIVER BASIN White River DRAINAGE AREA (mi²) 0.01 55 LAT. **39.24355** LONG. LENGTH OF STREAM REACH (ft) RIVER CODE RIVER MILE SCORER KSS/DEW COMMENTS (Long: -86.53519) (Concrete Gutter-Modified Class I) DATE **04/25/12**

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions			
STREAM CHANNEL	RECOVERY		
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE OM	HHEI Metric Points Substrate Max = 40 7 A + B		
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	Pool Depth Max = 30		
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0			
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Bankfull Width Max=30		
COMMENTS OHW 1.0'/0.2' AVERAGE BANKFULL WIDTH (meters): 0.3	5		
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ✓	·		

	RIPARIAN ZONE AND FLOODPI	AIN QUAL	.ITY ☆NOTE: Ri	ver Left (L) and Ri	ght (R) as lo	ooking downstream 🛠
	RIPARIAN WIDTH	<u>FLOODP</u>	LAIN QUALITY			
<u>L F</u>	R (Per Bank)	L R	(Most Predominant	per Bank)	L R	
	Wide >10m		Mature Forest, Wetl	and		Conservation Tillage
	Moderate 5-10m		Immature Forest, Si Field	hrub or Old	V	Urban or Industrial
	Narrow <5m		Residential, Park, N	ew Field		Open Pasture, Row Crop
✓ •	None		Fenced Pasture			Mining or Construction
	COMMENTS					
\blacksquare	FLOW REGIME (At Time of Evaluation Stream Flowing Subsurface flow with isolated pools COMMENTS_	, ,				ols, no flow (Intermittent) hemeral)
/	SINUOSITY (Number of bends per None 0.5	er 61 m (200 1.0 1.5	Oft) of channel) (Ch	eck ONLY one box 2.0 2.5	×):	3.0 >3
STRE Flat (0.5 ft	Flat to Moderate	Mode	erate (2 ft/100 ft)	Moderate to S	Severe	Severe (10 ft/100 ft)





Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 4.5 feet Channelized/Type: No/Natural **OHWM Depth:** 1.3 feet **USCOE Jurisdiction: Stream Type:** Ephemeral Yes **Evaluation Type: IDEM Jurisdiction:** HHEI Yes **Evaluation Score:** Watershed Area: 0.04 sq mi 26

UTME: 1772063 ft **UTMN**: 14251937 ft

Ν

Legal Drain (Y/N):

Stream S5-S092i – Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	40	0.01	0.00
5	40	0.01	0.00
6	35	0.01	0.00
7	2	0.01	0.00
8	2	0.01	0.00
RPA 8	2	0.01	0.00

Predominant Sub:

Leaf pack/muck

Description of Potential Impact:

Impacts to S5-S092i for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. This is a 40-foot long day-lighted portion of stream situated in between culverts. The substrate is predominately muck and leaf pack. There is a narrow riparian buffer associated with this short stream segment. The floodplain consists of the new field on the left bank and a newly graded area on the right. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S092i are on the second page of this form.



Photograph Taken Upstream





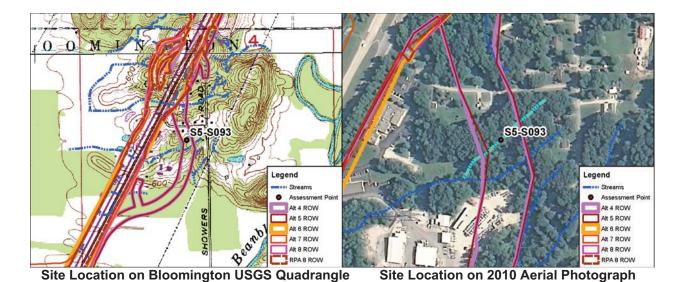
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S092i RIVER BASIN White River DRAINAGE AREA (mi²)	0.04
LENGTH OF STREAM REACH (ft) 40 LAT. 39.24438 LONG. RIVER CODE RIVER MILE	
DATE 04/24/12 SCORER KSS COMMENTS (Long: -86.53500) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Ins	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL PRECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
□ BLDR SLABS [16 pts] □ □ SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] O LEAF PACK/WOODY DEBRIS [3 pts] O FINE DETRITUS [3 pts] O O O O O O O O O O O O O	Substrate
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts]	6
SAND (<2 mm) [6 pts] 0% ARTIFICIAL [3 pts] 0%	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depti
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters): 4	
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' AVERAGE BANKFULL WIDTH (meters): 1.40	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH L R (Most Predominant per Bank) Moderate 5-10m Moderate 5-10m Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 1.40 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed Residential, Park, New Field Floow Regime (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermitter) Moist Channel, isolated pools, no flow (Intermitter)	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream: RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Moderate 5-10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed Riparian Wide >10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed Riparian Wide >10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed Fenced Pasture FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' AVERAGE BANKFULL WIDTH (meters): 1.40 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Comments FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Moter Pedominant per Bank) Mide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Completed RIPARIAN WIDTH Fenced Pasture Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 4.5'/1.3' AVERAGE BANKFULL WIDTH (meters): 1.40 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Residential, Park, New Field Open Pasture, Row Comments FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	Width Max=30 15

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):		S5-S092i
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Atta	ach Completed OHFL Form)	
DOWNSTREAM DESIGNATED USE(S)	adir dompidada Qirizi i dimiy	
WWH Name: Beanblossom Creek	_ Distance from Evaluated Stream _	0.57
CWH Name:	_ Distance from Evaluated Stream _	
EWH Name:	Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHEI	D AREA. CLEARLY MARK THE SITE LO	OCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map F	Page: NRCS Soil Map Stream	Order _
County: Monroe Township / City: Bloom	nington	
MISCELLANEOUS		
Base Flow Conditions? (Y/N):_Y Date of last precipitation:_ 04/19/12	Quantity: 0.20	
Photograph Information:		
Elevated Turbidity? (Y/N): N Canopy (% open): 95%		
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id.	and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.)	Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:		
Additional comments/description of pollution impacts:		
BIOTIC EVALUATION		
Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional	il. NOTE: all voucher samples must be la	beled with the site
ID number. Include appropriate field data sheets from the Pr	-	
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N) Agustia Magripustables	Voucher? (Y/N) N	N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) Aquatic Macroinvertebra Comments Regarding Biology:	tes Observed? (Y/N) N Voucher? (Y/IN)
DRAWING AND NARRATIVE DESCRIPTION OF STREAM F	REACH (This <u>must</u> be comple	ted):
Include important landmarks and other features of interest for site evaluation a	nd a narrative description of the strea	m's location
See Stream Assessment Form		

FLOW

See Stream Assessment Form S5-S092i for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream **USGS** Quadrangle: Bloomington Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A **OHWM Width:** Watershed: 05120202010 2.0 feet Channelized/Type: No/Natural OHWM Depth: 1.3 feet Stream Type: Ephemeral **USCOE Jurisdiction:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 42 Watershed Area: 0.01 sq mi

Legal Drain (Y/N): N **Predominant Sub:** Clay/bedrock

UTME: 1773330 ft **UTMN**: 14252193 ft

Stream S5-S093 – Class II PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	265	0.01	0.84
5	228	0.01	0.75
6	0	0.00	0.00
7	0	0.00	0.00
8	0	0.00	0.00
RPA 8	0	0.00	0.00

Description of Potential Impact:

Impacts to S5-S093 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate consists of clay, bedrock, and gravel. There is a wide riparian corridor on both banks of the stream where Alternatives 4 and 5 cross this stream. The floodplain consists primarily of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S093 are on the second page of this form.



Photograph Taken Upstream



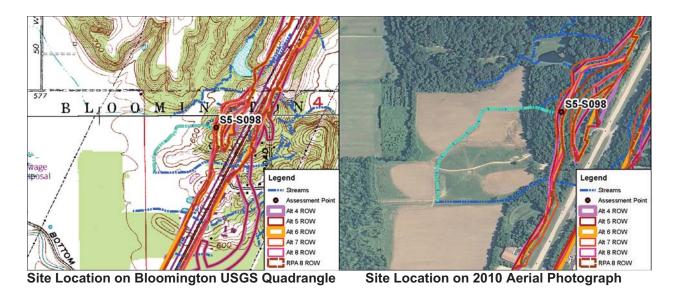
Photograph Taken Downstream



SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S093 RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ff) 200 LAT. 39.24506 LONG. RIVER CODE RIVER MILE	
DATE 05/11/06 SCORER A Rogers COMMENTS (Long: -86.53053) (Natural Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] 20% FINE DETRITUS [3 pts] 0%	Substrat
COBBLE (65-256 mm) [12 pts] 10% CLAY or HARDPAN [0 pt] 40%	Max = 40
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ ☐ O% ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	22
Substate Percepture	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 16	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts]	15
COMMENTS MAXIMUM POOL DEPTH (centimeters): 6	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
	Bankful Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ (<=3' 3") [5 pts]	Width
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] (Check ONLY one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.80	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.80	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): O.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream: RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Conservation Tillage	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Wide >10m Moderate 5-10m Moderate 5-10m One Pasture Pow Completed Urban or Industrial Field	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Vide >10 m Vi	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) Wide >10m Moderate 5-10m Moderate 5-10m One Pasture Pow Completed Urban or Industrial Field	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH FLOODPLAIN QUALITY □ Wide >10 m (See Finish) □ Mature Forest, Wetland □ Conservation Tillage □ Immature Forest, Shrub or Old □ Urban or Industrial □ Narrow <5m □ Residential, Park, New Field □ Open Pasture, Row Cr □ None □ Fenced Pasture □ Mining or Construction COMMENTS	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): O.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And the forest, which will be represented to the field of the field o	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R)	Width Max=30
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY AVERAGE BANKFULL WIDTH (meters): 0.80 RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) Vide >10 m (x=3' 3") [5 pts] L R (Most Predominant per Bank) I R (Most Predominant per Bank) I Mature Forest, Wetland Moderate 5-10 m Moderate 5-10 m Residential, Park, New Field Narrow <5 m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral)	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream: RIPARIAN WIDTH L R (Per Bank) Wide >10 m L R (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Moderate 5-10 m Residential, Park, New Field Open Pasture, Row Cr None Residential, Park, New Field Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): AVERAGE BANKFULL WIDTH (meters):	Width Max=30
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 2.1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream: RIPARIAN WIDTH L R (Per Bank) Wide >10 m L R (Most Predominant per Bank) Wide >10 m Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Urban or Industrial Moderate 5-10 m Residential, Park, New Field Open Pasture, Row Cr None Residential, Park, New Field Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): None 1.0 2.0 3.0	Width Max=30

ADDITIONAL STREAM INFORMATI	ON (This Information Must Al	so be Completed):		85-8093
QHEI PERFORMED? -	Yes ✓ No QHEI Score	(If Yes, Atta	ch Completed QHEI Form	1)
DOWNSTREAM DESIGNATION OF STREET OF			_ Distance from Evaluate _ Distance from Evaluate _ Distance from Evaluate	d Stream
MAPPING: ATTACH COPI	ES OF MAPS, INCLUDING THE	ENTIRE WATERSHED	AREA. CLEARLY MARK	THE SITE LOCATION
USGS Quadrangle Name: Blooming	gton	NRCS Soil Map P	age: 18 NRCS Soil	Map Stream Order
County: Monroe	Tow	nship / City: Bloom	ington	
MISCELLANEOUS				
Base Flow Conditions? (Y/N):_N	Date of last precipitation:	05/11/06	Quantity: 0.60	
Photograph Information:				
Elevated Turbidity? (Y/N):N	Canopy (% open): 2	5%		
Were samples collected for water ch	emistry? (Y/N): N (Note	lab sample no. or id. a	and attach results) Lab Nu	mber:
	Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmh	nos/cm)
Is the sampling reach representative	of the stream (Y/N) Y If no	ot, please explain:		
Additional comments/description of p	ollution impacts:			
BIOTIC EVALUATION				
, ,	s, Record all observations. Vouc	·	•	
Frogs or Tadpoles Observed? (Y/N)	` ~	Observed? (Y/N)	Voucher? (Y/N)	Voucher? (Y/N)
Comments Regarding Biology:				1
DRAWING AND NA	ARRATIVE DESCRIPTIO	N OF STREAM R	REACH (This <u>must</u> b	e completed):
Include important landmarks	and other features of interest	for site evaluation an	d a narrative description	of the stream's location
▲ See Stre	am Assessment Fo	orm		
	or site topograp			
aerial p	hotograph, and i	resource ph	otographs	

Reset Form



Aquatic Resource: Stream **USGS** Quadrangle: Bloomington **Stream Name:** Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A 1.1 feet Watershed: 05120202010 OHWM Width: Channelized/Type: No/Natural **OHWM Depth:** 0.5 feet Stream Type: Ephemeral **USCOE Jurisdiction:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 35 **Watershed Area:** 0.01 sq mi

UTME: 1772603 ft **UTMN**: 14253738 ft

Ν

Legal Drain (Y/N):

Stream S5-S098 – Class I PHWH			
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)
4	76	0.01	0.67
5	74	0.01	0.66
6	0	0.00	0.37
7	100	0.01	0.74
8	1	0.01	0.37
RPA 8	0	0.00	0.34

Predominant Sub:

Leaf pack/bedrock

Description of Potential Impact:

Impacts to S5-S098 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate consists of bedrock, gravel, and leaf pack. There is a wide riparian corridor on both banks of the stream where the Alternatives cross this stream. The floodplain consists primarily of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S098 are on the second page of this form.



Photograph Taken Upstream



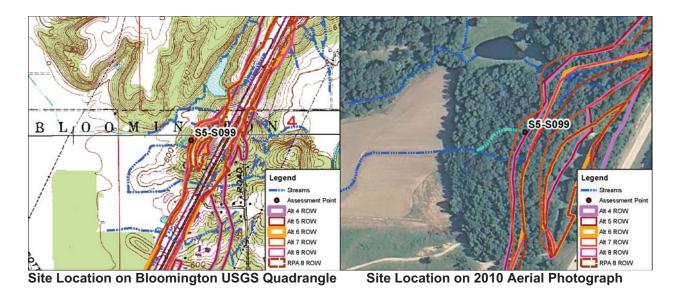
Photograph Taken Downstream



SHE NAME/I OCATION 1-03 SECTION 3	
SITE NAME/LOCATION I-69 Section 5 SITE NUMBER S5-S098 RIVER BASIN White River DRAINAGE AREA (mi²)).01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24932 LONG. RIVER CODE RIVER MILE	
DATE 05/11/06 SCORER A Rogers COMMENTS (Long: -86.53306) (Natural Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute 1.	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHE
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] 0% SILT [3 pt] 5%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] BEDROCK [16 pt] DELEAF PACK/WOODY DEBRIS [3 pts] 45% 0% 0%	Substrat
COBBLE (65-256 mm) [12 pts] 10% CLAY or HARDPAN [0 pt] 5%	Max = 4
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ ☐ O% ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	25
Total of Percentages of 20 00% (A) Substrate Percentage (B)	A + B
Bldr Slabs, Boulder, Cobble, Bedrock	^.5
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts]	5
COMMENTS Minimal pools MAXIMUM POOL DEPTH (centimeters): 5	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	- Devilée
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.1' / 0.5' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.1' / 0.5' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆ NOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.1' / 0.5' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.1' / 0.5' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) V Wide > 10m Mature Forest, Wetland Conservation Tillage	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) V Wide >10m Wide >10m Moderate 5-10m Narrow <5m Narrow <5m L R (Residential, Park, New Field V ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.80 L R (Most Predominant per Left (L) and Right (R) as looking downstream And the production of the producti	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	Width Max=30
Solution	Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY LR (Per Bank) Vide >10 m (<=3' 3") [5 pts] LR (Most Predominant per Bank) Vide >10 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY LR (Per Bank) Vide >10 m	Width Max=30
S 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] S 1.0 m (<=3' 3") [5 pts]	Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH RIPARIAN WIDTH	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.1' / 0.5' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m	Width Max=30
S 3.0 m -4.0 m S 9' 7" - 13') [25 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.5 m -3.0 m S 7" - 4' 8") [20 pts] S 1.0 m (<=3' 3") [5 pts] S 1.0 m (Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1.1' / 0.5' AVERAGE BANKFULL WIDTH (meters): 0.80 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m	Width Max=30

ADDITIONAL STREAM INFORMATION (This Information Must A	S5-S098 <u>slso be Completed):</u>
QHEI PERFORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Beanblossom Creek CWH Name: EWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE	ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington	NRCS Soil Map Page: 18 NRCS Soil Map Stream Order
County: Monroe To	wnship / City:Bloomington
MISCELLANEOUS Base Flow Conditions? (Y/N): N _ Date of last precipitation:	05/11/06 Quantity: 0.60
Photograph Information: 61 Upstream / 62 Downstream / 63 Rig	ht bank / 64 Left bank
Elevated Turbidity? (Y/N): N Canopy (% open):	s lab sample no. or id. and attach results) Lab Number:
	pH (S.U.) Conductivity (µmhos/cm)
Y	not, please explain:
Additional comments/description of pollution impacts:	
BIOTIC EVALUATION	
	cher collections optional. NOTE: all voucher samples must be labeled with the site data sheets from the Primary Headwater Habitat Assessment Manual)
\ / 	s Observed? (Y/N) Voucher? (Y/N) quatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:	
DRAWING AND NARRATIVE DESCRIPTION	ON OF STREAM REACH (This <u>must</u> be completed):
Include important landmarks and other features of interest	for site evaluation and a narrative description of the stream's location
See Stream Assessment F	'orm
See Stream Assessment F	
aerial photograph, and	_





Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 3.0 feet Channelized/Type: No/Natural **OHWM Depth:** 0.3 feet Stream Type: Ephemeral **USCOE Jurisdiction:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes **Evaluation Score:** 19 Watershed Area: 0.01 sq mi

UTME: 1772623 ft **UTMN**: 14253876 ft

Ν

Legal Drain (Y/N):

Stream S5-S099 – Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	8	0.01	0.21	
5	8	0.01	0.22	
6	0	0.00	0.10	
7	56	0.01	0.37	
8	0	0.00	0.09	
RPA 8	0	0.00	0.07	

Predominant Sub:

Silt/sand

Description of Potential Impact:

Impacts to S5-S099 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The substrate consists primarily of silt and sand. There is a wide riparian corridor on both banks of the stream where the Alternatives cross this stream. The floodplain consists primarily of mature forest. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S099 are on the second page of this form.



Photograph Taken Upstream



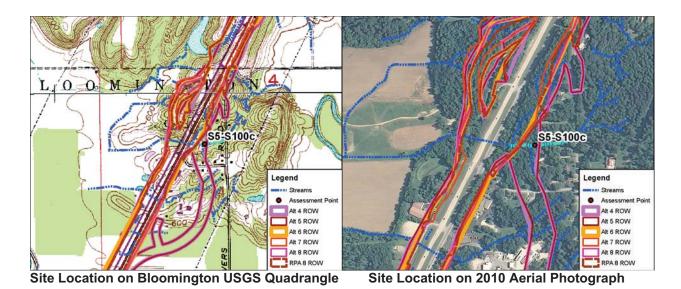


SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S099 RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24970 LONG. RIVER CODE RIVER MILE	
DATE 10/17/11 SCORER DEW/KSS COMMENTS (Long: -86.53299) (Natural-Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Institute of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams of the Complete All Items On This Form - Refer to This Form - Refer	tructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	ECOVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	HHEI Metric
□ □ BLDR SLABS [16 pts] □ □ SILT [3 pt] 50%	Points
BOULDER (>256 mm) [16 pts]	Substrate
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt] 0%	Max = 40
GRAVEL (2-64 mm) [9 pts] 5% MUCK [0 pts] 0%	14
SAND (<2 mm) [6 pts]	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock (A) Substrate Percentage Check 100%	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 30
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	,
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	· ——
	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] < 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.0 m (<=3' 3") [5 pts] ≤ 1.0 m (<=3' 3") [5 pts]	
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' AVERAGE BANKFULL WIDTH (meters):	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH RIPARIAN WIDTH L R (Most Predominant per Bank) L R	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) and River Left (L) and Right (R) and River Left (R) and River Left (R) and River	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m L R (Most Predominant per Bank) I Mature Forest, Wetland I Moderate S-10m Conservation Tillage I Immature Forest, Shrub or Old I Urban or Industrial Field	Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY L R (Per Bank) Vide >10m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): O.90 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Most Predominant per Bank) Viv Wide >10m Mature Forest, Wetland Moderate 5-10m Residential, Park, New Field Open Pasture, Row of the completed of the complete of the	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) V Wide >10m Moderate 5-10m L R (Most Predominant per Bank) I Mature Forest, Wetland I Moderate S-10m Conservation Tillage I Immature Forest, Shrub or Old I Urban or Industrial Field	Width Max=30
Solution	Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH LR (Per Bank) Vide >10 Moderate 5-10m Moderate 5-10m Narrow <5m Narrow <5m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Stream Flowing Stream Flowing AVERAGE BANKFULL WIDTH (meters): 0.90 Missi Channel, isolated pools, no flow (Intermitted) AVERAGE BANKFULL WIDTH (meters): 0.90 AVERAGE BANKFULL W	Width Max=30
Solution	Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY L R (Per Bank) Wide >10m Wide >10m Moderate 5-10m Narrow <5m None None COMMENTS FLOW REGIME (At Time of Evaluation) Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS AVERAGE BANKFULL WIDTH (meters): 0.90 AVE	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 mature Forest, Wetland	Width Max=30
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH	Width Max=30
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3'/0.3' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream Note	Width Max=30 5

ADDITIONAL STREA	M INFORMATION (This Information Must Also be C		-8099
QHEI PERI	FORMED? - Yes V No QHEI Score	(If Yes, Attach Completed QHEI Form)	
	REAM DESIGNATED USE(S) anblossom Creek	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream	
MAPPING:	ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE	WATERSHED AREA. CLEARLY MARK THE SITE LOCATION	N
USGS Quadrangle Na	Bloomington NR0	CS Soil Map Page: NRCS Soil Map Stream Order	
County: Monroe	Township /	City: Bloomington	
MISCELLA	NEOUS		
Base Flow Conditions	s? (Y/N): Y Date of last precipitation: 10/	/13/11 Quantity: 0.25	
Photograph Information			
Elevated Turbidity? (//N): N Canopy (% open): 0%]	
Were samples collect	ted for water chemistry? (Y/N): (Note lab same	nple no. or id. and attach results) Lab Number:	
		pH (S.U.) Conductivity (µmhos/cm)	
	representative of the stream (Y/N) If not, please		
Additional comments	/description of pollution impacts:		
Performed? (Y/N): Fish Observed? (Y/N) Frogs or Tadpoles Ob Comments Regarding DRAW	(If Yes, Record all observations. Voucher colle ID number. Include appropriate field data shee N Voucher? (Y/N) N Salamanders Observations (Y/N) N Aquatic Mag Biology: ING AND NARRATIVE DESCRIPTION OF	ections optional. NOTE: all voucher samples must be labeled wite the from the Primary Headwater Habitat Assessment Manual) ved? (Y/N) N Voucher? (Y/N) N Vouche	
FLOW →	See Stream Assessment Form S5-S099 for site topograph: aerial photograph, and reso	ic map,	

Save as pdf





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 3.5 feet Channelized/Type: No/Natural OHWM Depth: 0.9 feet **Ephemeral USCOE Jurisdiction: Stream Type:** Yes **Evaluation Type: IDEM Jurisdiction:** HHEI Yes **Evaluation Score:** Watershed Area: 0.09 sq mi 27

UTME: 1773287 ft **UTMN**: 14252929 ft

Ν

Legal Drain (Y/N):

Stream S5-S100c - Class I PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	321	0.03	1.46	
5	323	0.03	1.48	
6	107	0.01	0.48	
7	89	0.01	0.39	
8	124	0.01	0.55	
RPA 8	118	0.01	0.53	

Predominant Sub:

Sand/silt

Description of Potential Impact:

Impacts to S5-S100c for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists predominantly of sand, silt and leaf pack. There is a wide riparian buffer associated with this stream. The floodplain consists of a sparsely forested area adjacent to both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S100c are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

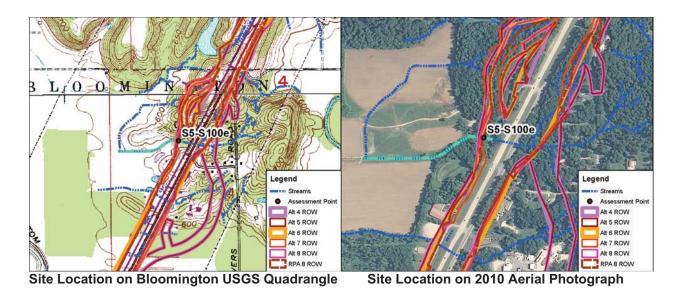
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S100c RIVER BASIN White River DRAINAGE AREA (mi²)	0.09
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24709 LONG. RIVER CODE RIVER MILE	
DATE 10/17/11 SCORER DEW/KSS COMMENTS (Long: -86.53066) (Natural Class I)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Insti	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED RECOVE	OVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.	HHE
TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts]	Points
BEDROCK [16 pt] BEDROCK [16 pt] O% FINE DETRITUS [3 pts] O%	Substrat Max = 4
COBBLE (65-256 mm) [12 pts]	IVIAX - 4
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	12
Total of Percentages of 0.00% (A) Substrate Percentage Check 100%	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	Max = 3
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	
> 10 - 22.5 cm [25 pts]	0
COMMENTS MAXIMUM POOL DEPTH (centimeters): 0	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankful
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \(\leq 1.0 m (<=3' 3") [5 pts]	Bankful Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] ✓ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] \(\leq 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] ✓ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) AN	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Noderate 5-10m V I mature Forest, Shrub or Old Field Urban or Industrial	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) V Wide >10m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m V 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (<=3' 3") [5 pts] AVERAGE BANKFULL WIDTH (meters): 1.07 L R (Per Bank) L R (Most Predominant per Bank) L R (Most Predominant per Bank) V Wide >10m Mature Forest, Wetland Urban or Industrial	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Vide >10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream ↑ RIPARIAN WIDTH L R (Per Bank) Vide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS Through maintained residential vards - no bed/bank at many locations FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (Intermittent)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream A RIPARIAN WIDTH L R (Per Bank) Viv Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS Through maintained residential vards - no bed/bank at many locations FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY NOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10m Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field Narrow <5m Residential, Park, New Field None COMMENTS Through maintained residential vards - no bed/bank at many locations FLOW REGIME (At Time of Evaluation) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH L R (Per Bank) Vide >10 m (<=3' 3") [5 pts] 1.07 This information must also be completed RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m (Signature Forest, Wetland) Mature Forest, Wetland Moderate 5-10m Narrow <5m Narrow <5m Residential, Park, New Field None COMMENTS Through maintained residential vards - no bed/bank at many locations FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS Moist Channel, isolated pools, no flow (Intermittent Dry channel, no water (Ephemeral))	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW = 3.5'/.9' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30

ADDITIONAL STREAM IN	FORMATION (This Information M	/lust Also be Completed):	S5-S100c
QHEI PERFORM	MED? - Yes ✓ No QHEISc	ore (If Yes, At	tach Completed QHEI Form)
DOWNSTREAM WWH Name: Beanble CWH Name: EWH Name:	DESIGNATED USE(S) DSSOM Creek		Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
MAPPING: ATT	ACH COPIES OF MAPS, INCLUDIN	G THE <u>ENTIRE</u> WATERSHE	ED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name:	Bloomington	NRCS Soil Map	Page: NRCS Soil Map Stream Order
County: Monroe		Township / City: Bloo	mington
MISCELLANEO Base Flow Conditions? (Y/		tion: 10/13/11	Quantity: 0.25
Photograph Information:	<u> </u>		
Elevated Turbidity? (Y/N):	N Canopy (% open):	65%	<u> </u>
	or water chemistry? (Y/N):	(Note lab sample no. or id	. and attach results) Lab Number:
Field Measures: Temp	(°C) Dissolved Oxygen (m	ng/l) pH (S.U.)	Conductivity (µmhos/cm)
Is the sampling reach repr	esentative of the stream (Y/N)	If not, please explain:	
Additional comments/desc	ription of pollution impacts:		
BIOTIC EVALU Performed? (Y/N):N Fish Observed? (Y/N) Frogs or Tadpoles Observed Comments Regarding Biol	(If Yes, Record all observations ID number. Include appropriate Voucher? (Y/N) N Salam ed? (Y/N) N Voucher? (Y/N) N	e field data sheets from the F nanders Observed? (Y/N)	ral. NOTE: all voucher samples must be labeled with the site Primary Headwater Habitat Assessment Manual) Voucher? (Y/N) N Voucher? (Y/N) Voucher? (Y/N)
			REACH (This <u>must</u> be completed): and a narrative description of the stream's location
	ee Stream Assessm		
S	5-S100c for site	topographic m	ap,

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Reset Form

aerial photograph, and resource photographs



Aquatic Resource: Stream **USGS** Quadrangle: Bloomington **Stream Name:** Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 6.5 feet Channelized/Type: No/Natural OHWM Depth: 0.1 feet **Ephemeral USCOE Jurisdiction: Stream Type:** Yes **Evaluation Type:** HHEI **IDEM Jurisdiction:** Yes

Evaluation Score: 64 Watershed Area: 0.09 sq mi
Legal Drain (Y/N): N Predominant Sub: Sand/gravel

UTME: 1772543 ft **UTMN**: 14253023 ft

Stream S5-S100e - Class III PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	146	0.02	0.66	
5	144	0.02	0.65	
6	123	0.02	0.56	
7	126	0.02	0.55	
8	131	0.02	0.59	
RPA 8	97	0.01	0.44	

Description of Potential Impact:

Impacts to S5-S100e for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists predominantly of sand and gravel. There is a wide riparian buffer associated with this stream. The floodplain consists of the immature forest on both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S100e are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

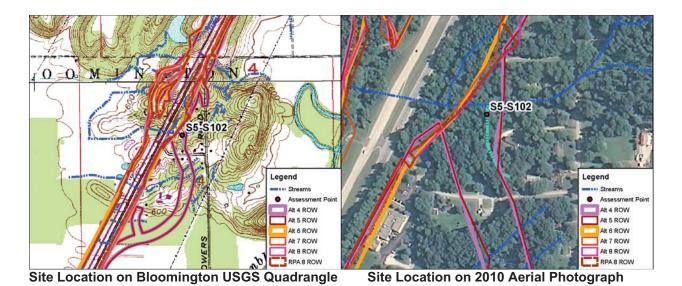
SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S100e RIVER BASIN White River DRAINAGE AREA (mi²)	0.09
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24736 LONG. RIVER CODE RIVER MILE	
DATE 05/30/12 SCORER JDP COMMENTS (Long: -86.53329) (Natural Class III)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REMODIFICATIONS:	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHEI
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metric
BLDR SLABS [16 pts] 0% SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts] BEDROCK [16 pt] O% LEAF PACK/WOODY DEBRIS [3 pts] O% FINE DETRITUS [3 pts] O%	Substrate
COBBLE (65-256 mm) [12 pts] 0% CLAY or HARDPAN [0 pt]	Max = 40
☐ ☐ GRAVEL (2-64 mm) [9 pts] ☐ ☐ MUCK [0 pts] ☐ ☐ O% ☐ ☐ ARTIFICIAL [3 pts] ☐ O% ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	19
Total of Percentages of Occor (A) Substrate Percentage (B)	1
Bldr Slabs, Boulder, Cobble, Bedrock Check Check	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 4	
 Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 	Pool Depth Max = 30
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	
> 22.5 - 30 cm [30 pts] < 5 cm [5 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts]	25
COMMENTS MAXIMUM POOL DEPTH (centimeters): 18	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Width
> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Max=30
COMMENTS OHW = 6.5'/1.0' AVERAGE BANKFULL WIDTH (meters): 1.98	20
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆	
RIPARIAN WIDTH FLOODPLAIN QUALITY	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage	
Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial	
Field — Open Pasture Pow C	rop
Narrow <5m Residential, Park, New Field Mining or Construction	
COMMENTS Periced Fasture Minning of Constituction	L
FLOW REGIME (At Time of Evaluation) (Check ONLY one box):	
Stream Flowing Moist Channel, isolated pools, no flow (Intermitter Subsurface flow with isolated pools (Interstitial) Dry channel, no water (Ephemeral)	t)
Subsurface flow with isolated pools (Interstitial) COMMENTS Dry channel, no water (Ephemeral)	_
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):	
None 1.0 2.0 3.0 3.0 7.5 1.5 2.5 7.5 3.0 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	
CTDE AM CDADIENT ECTIMATE	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft)	100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):
QHEI PERFORMED? - Yes ✓ No QHEI Score (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Beanblossom Creek Distance from Evaluated Stream CWH Name: Distance from Evaluated Stream EWH Name: Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: Bloomington NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Monroe Township / City: Bloomington
MISCELLANEOUS
Base Flow Conditions? (Y/N): Y Date of last precipitation: 05/28/12 Quantity: 0.14
Photograph Information:
Elevated Turbidity? (Y/N): _ N Canopy (% open): _ 25%
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, please explain:
Additional comments/description of pollution impacts:
BIOTIC EVALUATION Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the solution in the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vouc
Comments Regarding Biology:
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



See Stream Assessment Form S5-S100e for site topographic map, aerial photograph, and resource photographs





Aquatic Resource: Stream USGS Quadrangle: Bloomington

Stream Name: Unnamed Trib Beanblossom Ck Section: Quarter: NW Township: T9N Range: R1W IDEM 303(d) List: N/A Watershed: 05120202010 OHWM Width: 1.0 feet Channelized/Type: No/Natural OHWM Depth: 0.1 feet **Ephemeral USCOE Jurisdiction: Stream Type:** Yes **Evaluation Type: IDEM Jurisdiction:** HHEI Yes

Evaluation Score:41Watershed Area:0.01 sq miLegal Drain (Y/N):NPredominant Sub:Leaf Pack/cobble

UTME: 1773250 ft **UTMN**: 14252878 ft

Stream S5-S102 - Class II PHWH				
Alternatives	Length of Impact (feet)	Area of Impact (acres)	Riparian Impact (acres)	
4	361	0.01	0.87	
5	334	0.01	0.93	
6	0	0.00	0.00	
7	0	0.00	0.00	
8	0	0.00	0.00	
RPA 8	0	0.00	0.00	

Description of Potential Impact:

Impacts to S5-S102 for Alternatives 4, 5, 6, 7, 8 and RPA 8 are listed in the table above. The channel consists predominantly of cobble, gravel, bedrock, and leaf pack. There is a wide riparian buffer associated with this stream. The floodplain consists of a sparsely forested area adjacent to both banks. Photographs taken upstream and downstream in the area where these Alternatives cross S5-S102 are on the second page of this form.



Photograph Taken Upstream



Photograph Taken Downstream



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

SITE NAME/LOCATION I-69 Section 5	
SITE NUMBER S5-S102 RIVER BASIN White River DRAINAGE AREA (mi²)	0.01
LENGTH OF STREAM REACH (ft) 200 LAT. 39.24695 LONG. RIVER CODE RIVER MILE	
DATE 05/11/06 SCORER A Rogers COMMENTS (Long: -86.53080) (Natural-Class II)	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	ructions
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING.	COVERY
1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes	HHE
(Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B. TYPE PERCENT TYPE PERCENT	Metri
BLDR SLABS [16 pts] 0% SILT [3 pt] 10%	Points
BOULDER (>256 mm) [16 pts]	Substrat
COBBLE (65-256 mm) [12 pts] 20% CLAY or HARDPAN [0 pt] 5%	Max = 4
☐ GRAVEL (2-64 mm) [9 pts] ☐ MUCK [0 pts] ☐ 0% ☐ ARTIFICIAL [3 pts] ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0% ☐ 0	21
Total of Percentages of Co. Co. (A) Substrate Percentage (B)	
Bldr Slabs, Boulder, Cobble, Bedrock	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 6	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Pool Dep Max = 3
> 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts]	IVIAX - 3
 > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0 pts] 	15
COMMENTS MAXIMUM POOL DEPTH (centimeters): 6	
COMMENTS WAXIMOM FOOL DEFTH (Centimeters).	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ✓ ≤ 1.0 m (<=3' 3") [5 pts]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.35	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' AVERAGE BANKFULL WIDTH (meters): This information must also be completed	Width Max=30
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> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ☆ RIPARIAN WIDTH L R (Per Bank) L R (Most Predominant per Bank) L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream ANOTE: River Left (L) and R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
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> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide > 10 m Mature Forest, Wetland Moderate 5-10m Moderate 5-10m Narrow <5m None Residential, Park, New Field None COMMENTS Flow REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) None water (Ephemeral)	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream And FLOODPLAIN QUALITY RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts] > 1.0 m (<=3' 3") [5 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' AVERAGE BANKFULL WIDTH (meters): OHW - 1' / 0.1' AVERAGE BANKFULL	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' AVERAGE BANKFULL WIDTH (meters): 0.35 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ANOTE: River Left (L) and Right (R) as looking downstream RIPARIAN WIDTH FLOODPLAIN QUALITY Wide >10 m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS OHW - 1' / 0.1' AVERAGE BANKFULL WIDTH (meters): AVERAGE BANKFULL WIDTH (meters): 0.35 This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY	Width Max=30

ADDITIONAL STREAM I	NFORMATION (This Information Must Also	o be Completed):		S5-S102
QHEI PERFOR	RMED? - Yes No QHEI Score	(If Yes, Atta	ch Completed QHEI Form)	ı
DOWNSTREA WWH Name: Beanb CWH Name: EWH Name:	M DESIGNATED USE(S)		_ Distance from Evaluated _ Distance from Evaluated _ Distance from Evaluated	Stream _
MAPPING: AT	TACH COPIES OF MAPS, INCLUDING THE E		AREA. CLEARLY MARK 1	THE SITE LOCATION
USGS Quadrangle Name	Bloomington	NRCS Soil Map P	age: 18 NRCS Soil N	Map Stream Order
County: Monroe		ship / City: Bloomi	ington	
MISCELLANE	ous			
Base Flow Conditions? (Y/N):_N _ Date of last precipitation:_	05/11/06	Quantity: 0.60	
Photograph Information:				
Elevated Turbidity? (Y/N)	:N	%		
Were samples collected	for water chemistry? (Y/N): Note la	b sample no. or id. a	and attach results) Lab Nun	nber:
	p (°C) Dissolved Oxygen (mg/l)	pH (S.U.)	Conductivity (µmho	os/cm)
Is the sampling reach rep	oresentative of the stream (Y/N) If not	, please explain:		
	scription of pollution impacts:			
Flows only during storn	m events.			
Performed? (Y/N): N Fish Observed? (Y/N) Frogs or Tadpoles Obser Comments Regarding Big	(If Yes, Record all observations. Voucher ID number. Include appropriate field dated voucher? (Y/N) Salamanders Coved? (Y/N) Voucher? (Y/N) Aqua	a sheets from the Prin	mary Headwater Habitat Ass Voucher? (Y/N)	
	G AND NARRATIVE DESCRIPTION landmarks and other features of interest fo		· —	-
FLOW S5	e Stream Assessment For -S102 for site topograprial	phic map,	otographs	

Save as pdf

